Gleanings in Bee Culture

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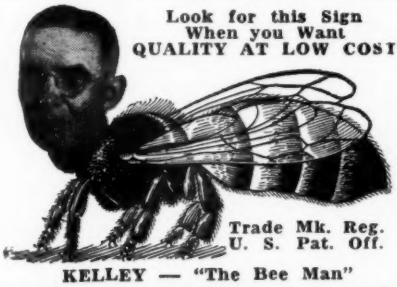

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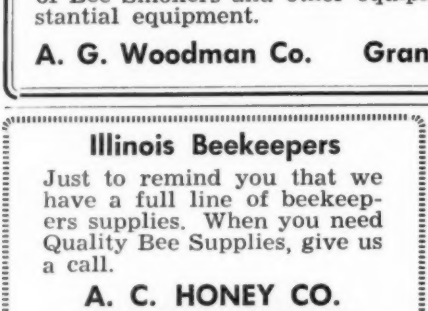

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Bee Lines to The Editor

"I was interested in reading the April issue about Propolis Pete's grim determination to get some section comb honey or bust.

"Perhaps Mr. C. Isaacson will mention this in his next month's Second Glances, but I just could not resist the temptation to make some comments myself. The most surprising part of Pete's article was that the task appeared like climbing a high mountain. Producing section honey need not try the soul of man. On the other hand, it is easy enough if a few important details are followed.

"I know that Pete does not need the advice that I am about to give but others may read these remarks. A person is on his own when producing section comb, there is no big soft lap of price support to fall back upon. Instead, it is a grand and glorious feeling when you can sell comb honey on its own honest to goodness. It does not require much of a label or descriptive literature to sell it. One never has to repeat the same fact twice, you do not get half way through. If Pete starts to give his customers comb honey, he is in for it from now on. After pro-

(Continued on page 377)

Monthly Honey Report

May 20, 1953

The following figures represent an expression of current prices from beekeepers and honey packers over the country. They are based on several reports from each state averaged with the reports in the region. Where insufficient information is returned, prices have been omitted from the chart. Where three figures appear on the chart the first figure represents the low, the middle figure represents the average, and the third figure the high price in cents per pound. Where only two figures are used the low and high are shown.

	North & South Atlantic	South Central	North Central	Mid-West	West
Bulk Honey:					
Table Grade	10½ 13c		11- -12c	10-12-12½c	10½ 12c
Industrial Grade			9- -10c	9½ 11c	
Price to Grocers:					
5 lb. jar - can	14-19-26	17-22-25	18-22-25	16-17-18	15-17-20
3 lb. jar - 12's	23- -28	20-22-25			
2 lb. jar - 12's	15- -28	20-23-25		22-23-25	17-23-25
1 lb. jar - 24's	24-29-30	19-23-25	21-24-27	23-25-27	20-24-25
Comb Honey:					
Cs. of 24 Sec.	$7.40-8.70-10.00				
Retail Price:					
60 lb. can	14-19½-30	19- -20	12-16-22½	15-17-21	14-15-17
5 lb. jar	18-27-45	20-26-31	16-22-25	18-21-25	19-21-25
3 lb. jar	30-34-45	25-29-33			
2 lb. jar	27-36-48	30-32-35		23-26-30	24-29-35
1 lb. jar	30-35-50	30-34-35	29-31-35	25-31-35	25-31-35
Honey Sales:	Fair	Fair	Fair	Slow	Fair
Estimated Crop:					
Condition based on normal %	96	89	82	84	97

A few comments from reporters:

"Wintering was good."—Connecticut.

"Rain has improved plant conditions."—Michigan.

"Bees have weakened during April."—Wisconsin.

"Bees storing lots of honey from holly and clover."—Arkansas.

"Crop prospects look good. Severe winter. Weather has taken its toll. Most colonies low on stores, few strong."—Nebraska.

"The government support announcement didn't support—it lowered prices."—Minnesota.

"Five pound pail so far is a 'leader' in stores here—hence low comparative price."—Minn.

"Soil moisture is extremely low."—Kansas.

"Bees building up slowly and very short of stores."—Kansas.

"At this time things look better than last year."—Colorado.

"Sage and orange total failure."—California.

"High and continuous winds have reduced crop prospects."—Arizona.

The general commodity price as reported in the Journal of Commerce for some 30 commodities stands at 280.3 as compared with 273.3 a month ago. 1938 is figured at 100.

See page 272 in May issue of Gleanings for 1953 season government honey price support.

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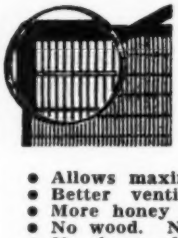

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Gleanings in Bee Culture

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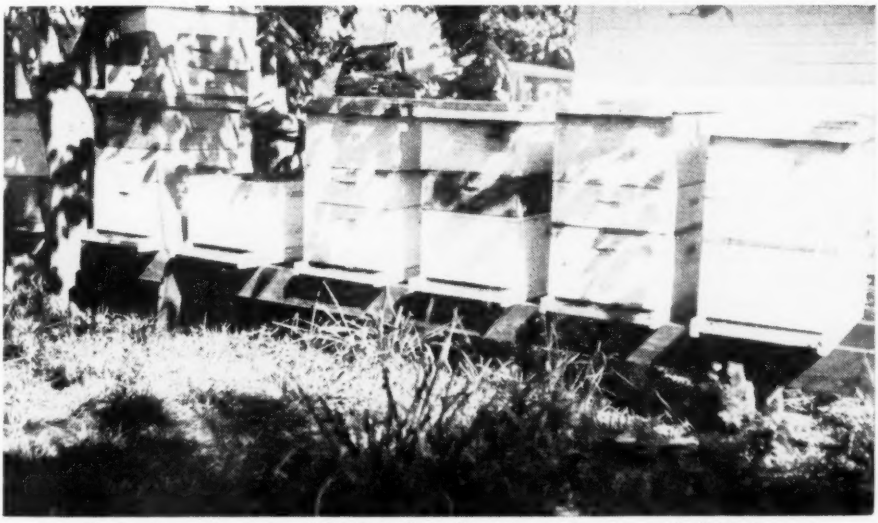
Suburban Beekeeping

By E. G. Carr, Pennington, N. J.



There is a new crop of backyard beekeepers each year and their bees render invaluable service as pollinators.

How it Can be Done in New Jersey

I am afraid too many persons tend to minimize the importance of the small beekeeper. It is conceded that bees are of more value as pollinators than as honey gatherers. The average number of colonies of bees to the beekeeper is around ten. Small beekeepers are widely scattered so irrespective of the possibilities of a crop of honey their bees do a good pollinating job. Just as there is a new crop of gardeners each spring, so there is a new crop of beekeepers, which is a good thing as it fills the gap made by the oldsters passing.

There are many persons in suburban areas who wish to keep a few colonies of bees, but are unable to care for them except on weekends and have trouble controlling swarming. They have no desire to increase their holdings and when a swarm escapes it much reduces the prospect for surplus

honey, also the swarm often proves a nuisance to neighbors.

A beekeeper in a suburban area of New Jersey worked out a schedule which keeps down increase, prevents swarming, and enables him to get a good crop of honey.

It is not supposed that the honey so gathered would make any great dent in the market. However, it does provide the beekeeper with plenty of honey for his own use and some for gifts for friends. Also, which is important, although often overlooked, the bees render invaluable service as pollinators for fruits and vegetables in the neighborhood.

Here is the plan as given at a meeting of the New Jersey Beekeepers' Association a few years ago. It is still good.

Keeping bees in this locality is quite different from other places where clover provides the main honey flow. Systems for success as laid down in most bee books do not work here. In fact, no system works in another apiary unless the conditions of the two apiaries are the same.

Two Important Requirements

There are but two important points which are good in any locality for a successful honey crop. The first is to have the colonies strong in bees at the beginning of the honey flow. Seldom are any too strong. The second is to know when the honey flow comes. The second is most important. Many persons in suburban areas, some of them beekeepers, think the bees gather a surplus from clover. The clover blossoms on the lawns are covered with bees but examination of the hives fails to show any surplus from this plant.

For several years a record has been kept of the nectar-producing flowers in this locality, and, not counting lesser flowers, there is a good flow from white maple around April 15th, after which comes fruit blossoms, California privet, and sumac. Then in the fall there is smartweed, goldenrod, and aster. Surplus comes only from privet and goldenrod. The privet flow comes when clover, sumac, etc., are in blossom. The honey from this plant has a very unpleasant taste, something like the bark of the bush. It is good only for feeding back to the bees.

The goldenrod honey is light golden and has a fine flavor. To gather this goldenrod honey has been a problem. Colonies in the fall usually are not as strong as they are at the beginning of summer, hence a system has been worked out which gives a good crop of goldenrod honey.

Bees are wintered in single stories. In the spring, at the beginning of the honey flow from white maple a super of drawn combs is put on top of the broodnest. If the season is at all favorable usually a ten-frame super of maple honey is gathered—the cells full although not capped. This honey is left for the bees. As this is the warmest part of the hive, the queen moves up and the bees convert this honey into bees.

When this super is full of brood, the queen is found, her wing is clipped, and she is put with a frame of brood in the lower story. On the lower story is put a queen excluder, on top of that a super with foundation, if some is to be drawn. Otherwise a super of drawn combs and on top of this is placed the super of brood. This is the Demaree swarm-control measure but it is not done entirely for the control of swarming.

Since beekeeping is a sideline only, most of the bee work is arranged for Saturday afternoons. On the Saturday afternoon following moving the brood to the upper story, it is found that the bees in the upper story, missing their queen, have built several nice supersedure queen cells. From this super is taken two frames of sealed brood, those having queen cells on them, and, with all the adhering bees, they are placed in an empty hive alongside. The entrance of the set-off hive is placed at right angles to the parent colony.

The two frames of brood are placed at the outside of the hive, a comb of honey next with frames of drawn combs to fill the hive, the cover put in place and the entrance closed bee tight. The unused queen cells in the parent hive are destroyed.

The division as described is made on Saturday afternoon, then on the following Thursday afternoon, late, the entrance to the division is opened at the side nearest the brood, making the opening about large enough for two

bees to pass. The opening is made late in the day so the excitement of the bees emerging from the division does not attract the attention of the full colonies.

Some of the old bees go back to their old home, but the young ones will stay and with the baby bees hatching, there soon is a nice little colony ready for the queen to mate, kill off her rivals, and set up housekeeping.

After the brood in the parent colony is sealed no further attention is paid to it. All that is necessary is to see that the nucleus is supplied with feed. About this time privet is yielding nectar so there is no robbing and privet honey makes fine bees.

This seems like a lot of work but it is not so much as it seems. All that is required is to keep the nucleus going. The parent colony can take care of itself.

By taking only two combs of brood from the parent colony it is left strong enough to gather a crop of early honey, that is, if there is any.

As the season advances the nucleus is gradually turned around so it eventually faces the same way as the parent colony and is close beside it. If there is any surplus from privet or other poor honey this is put in a super by itself on top.

About two weeks before the expected flow from goldenrod — calendar dates don't count for much — the two colonies are united by taking off the super and queen excluder of the parent colony and on it is placed a sheet of newspaper. Then the nucleus, minus the bottom board, is placed on the sheet of newspaper, then a super of drawn comb, on that a bee escape board, and then the supers of poor honey on top. The idea is to keep the poor honey from getting mixed with the goldenrod. After the bees have left the supers they are stored on a weak colony for the remainder of the season. Or if there is need for the combs, they are extracted and the combs used for storage of goldenrod honey.

It will be noticed that there are several things, sometimes recommended, which are omitted. Holes are not punched in the newspaper—the bees get together fast enough. The old queen is not killed. She is not even looked for. Just put together the two colonies as quickly and as gently as possible. The young queen in the upper colony is soon crowded down by the incoming nectar into the lower story with the old queen, and the young queen usually survives. If not, the old queen just has to work another year. There is no fighting when the honey flow is on. This is important. If a honey flow is on one can do almost anything with bees but if no nectar is coming in hardly anything will work right.

By this system several desirable results are had. Colonies are boiling over with bees at the beginning of the honey flow and they are requeened with non-travelled queens for the next season. The bees have been kept from swarming. Combs are drawn with poor honey. There is a good cluster of bees for winter. And, best of all, a good crop of goldenrod honey is harvested, and that in a place where there isn't supposed to be any.

How to Catch a Swarm

By Otto Sternberg, Martintown, Ontario, Canada

With mild amusement, I followed the different articles in your magazine on "how to catch a swarm." I have used a simple homemade device for 15 years. It is a wooden box 12 x 10 inches, about five inches deep, fastened to a long cedar pole. The length of the pole depends on the kind of trees in your surroundings. Hit the limb of the tree on which the swarm is clustered with the box. The swarm will come off or fly around. Place the box at the spot, if possible a few inches away. The swarm will come back and cluster in or around your box. After that, it is carried to the desired place. I have a catching box in every beeyard and never have to climb a tree or use other manipulations in order to capture a swarm.

Honey Production in the Georgian Bay District of Ontario

By E. A. Hogarth, Tara, Ontario

The Georgian Bay district is approximately one hundred miles northwest of Toronto. It is a rolling land of fertile hills and valleys with a gently sloping plain along Lake Huron. It was once covered with a hardwood forest, but most of it has been cut and now there is only a small amount of second-growth timber. Lake Huron lies to the west with Georgian Bay on the north. The proximity of these large bodies of water has a moderating influence on the weather. The winters are usually comparatively mild with an abundance of snow, the summers are often cool and wet.

Settled warm weather comes rather late in the spring as the winds are always cold from the North and West as long as ice remains in the Lake. This gives the bees a rather short time in which to build up for the clover honey flow which may begin anytime from June 19th to July 1st.

The willows, poplars, elms, red maples, and various shrubs supply an abundance of pollen and a little nectar during the first warm spring days. In order to take advantage of this our apiaries are all located in or as near a swamp as possible. Other conditions being equal, the closer the bees are to pollen, nectar, and water, the faster the spring build-up.

All Colonies Are Wintered in Double Brood Chambers

The winter wrapping is removed just as the dandelions begin to come in bloom. When unpacking, the colonies are hastily checked for stores and the dead colonies are examined for disease. Any weak colonies are placed over strong colonies with a sheet of newspaper and a queen excluder between them. Later on these weak colonies may be used for requeening other colonies or built up to full strength for the honey flow.

During the dandelion flow all colonies are checked for disease. Only the three center combs of the brood nest are examined at this time. If there is any disease present it is sure to show

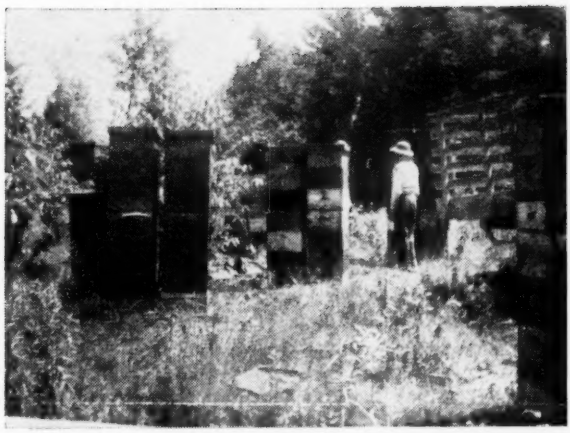
E. A. Hogarth

up on these combs as this is where the hatching brood is. If even one cell of disease is found in an apiary all the colonies in that yard are given a thorough examination ten days later. Diseased colonies are burned the day they are found. Only rarely do we find any disease, nevertheless it is necessary to be forever on the alert.

We haven't clipped queens for over twenty-five years; but we do like to have a few southern queens arriving daily so that any failing queens may be replaced at once. If we have time we make up a few nuclei in each yard to be used for requeening later.

Adding More Comb Space

When the colonies need more room a deep hive body of nine dark brood combs is placed on top without an excluder. This hive body will be the food chamber the coming winter. If more honey is gathered in the spring than the bees need before the clover flow, it will nearly all be in the new food chamber and therefore will not lower the quality of the clover honey. Only nine combs are used in the standard ten frame hive. We think the extra space between the combs helps to prevent swarming. With only nine combs in a hive body a colony can be manipulated in less time than when an extra comb is crowded in.



A good crop on these hives.

If the colonies have plenty of honey and pollen no further attention is necessary until the begining of the clover flow. At this time, during recent years the bees often gather enough honeydew for their daily needs. However honeydew is a nuisance if there is a surplus of it.

Most of our honey is gathered from alfalfa, white dutch and alsike clover. Sweet clover isn't grown nearly as much as it was ten years ago and basswood is of minor importance most years.

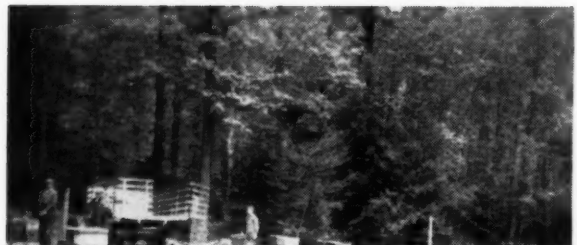
Just as the clover begins to come in bloom, but before any swarm cells are started the two lower hive bodies are reversed and the queen confined to them with a queen excluder. The new food chamber of nine brood combs is placed on the excluder and extracting supers with eight combs are added on top as needed during the honey flow.

We do not believe in Demareeing or splitting up the brood nest at this time as it often gives the colony quite a setback and frequently some of the brood is chilled if the weather turns cool. When the brood nest is divided at the beginning of the honey flow queen cells are almost sure to be started on that part of the brood separated from the queen and too often when cells are built swarming results.

It is very important to replace all failing queens when reversing the brood nest otherwise we will have trouble with supersedure and swarming. The old queen is killed and the colony requeened at once, with a nuc if we have them; if not, a southern queen is introduced in a push-in-the-comb cage. Only those colonies that have continuous brood rearing produce a maximum crop. With a compact brood nest, vigorous young queens and plenty of super room, swarming is a minor problem and it is seldom necessary to check colonies for swarm cells.

As our season is very short we buy most of our queens. We are fortunate in having a reliable southern queen breeder co-operate with us, giving us prompt service, vigorous queens, whose bees are good producers, hardy, practically non-swarming and reasonably gentle. There is a remarkable difference in the strains of bees supplied from the south. A beekeeper should shop around until he finds a queen breeder who supplies a strain of bees best suited for his conditions. We recently tried a hybrid strain that used up most of their energy trying to swarm. Needless to say they were useless as honey producers. Another man supplied us with Italians that were excellent producers, but they failed to store any quantity of honey in or around the brood nest as the season drew to a close. Consequently we had to feed them heavily.

Just as soon as the bees are storing nicely in the supers but before they become very heavy, all the supers above the queen excluder are lifted off with a pair of hive lifters. The queen is driven down into the lower brood chamber with carbolic. The second brood chamber is removed and the queen excluder is placed on the lower brood chamber. Of course, all failing queens are replaced as we go along.



Unpacking in this yard is almost finished.

The pile of supers are replaced above the queen excluder and the hive body of brood is put on top of the pile. Apparently this brood draws bees from the brood nest and helps to keep the colony contented. Any queen cells that are started on this brood may be ignored as only rarely will they cause swarming at this time.

A week later we check the brood in these top supers to see if we missed any queens, usually three to five percent. A queen excluder placed under the brood at the time it was put up will speed up the finding of these queens. If any increase is desired now is the time to make it. A hive body of sealed brood and honey is set off on a stand of its own and either given a queen or allowed to raise one if it has a nice cell. Increase made in this way requires very little attention and if there is a fall flow they can easily gather their winter stores.

As the brood hatches out in these top supers the bees fill them with honey. They are then taken home and extracted with the rest of the crop. Each season the lower brood chamber is manipulated in this manner. This enables us to cull the combs and paint and repair the hive bodies during the winter. If the same hive bodies are left in the yard continuously they soon deteriorate.

Getting Food Chamber Well Filled

Formerly we let the queen occupy the double brood chamber all season, but all too often when fall came the food chamber was full of brood instead of honey. It is much more satisfactory for us to confine the queen to one brood chamber during the clover flow and we make sure the food chamber is crammed full when we are removing the honey.

At harvest time, the bees are driven out of the supers with carbolic. The supers are piled five high on skids on the truck. At the honey house the supers are wheeled off the truck into the warming room and then into the extracting room as needed. The warming room holds 1500 supers piled on skids and is kept at 85 degrees with a stoker fired boiler. The air in the room is circulated by an overhead heating unit which forces the warm air down over the combs.

The combs are uncapped by an automatic uncapper. Two vertical steam heated vibrating knives slice the cappings from the combs as they pass between the knives on an endless chain. The cappings fall from the knives into a capping dryer which runs continuously while we are extracting. Twice a day the dried cappings are removed from the dryer. They are rendered into wax in a steam chest and the residue from the chest is pressed in a hot water press.

Three 45-frame extractors, extract the honey from the combs, which are then replaced in the empty supers piled on the skids and wheeled onto the truck. At the end of the day the supers of extracted combs are taken outside, placed in piles eight high and staggered so that the bees may rob

them out. They are covered to protect the combs from the weather. As there is considerable draft through the supers we have no trouble with the wax moth and the combs are left outside until after freezing weather.

The honey runs by gravity from the extractors to a series of shallow settling tanks for clarification. It is then filled into 70-pound drums ready for shipment.

At the time the white honey is removed an empty super is left on each colony for fall honey; which in this district is gathered during the month of August. We seldom get much honey after September 1st.

Most of our fall honey comes from alfalfa, goldenrod, and sometimes buckwheat. The past few years asters have become more plentiful than formerly. The fall honey is removed as soon as we have time. Quite a few supers of sealed combs of fall honey are stored for spring feed.

Regardless of how well filled the food chambers are when the fall honey is taken off, there are usually a few colonies in most yards that require more food for winter by the time October comes. We want the food chamber completely filled as well as some honey in the lower brood chamber. At one time we tried putting in full combs of honey, but too often we had to remove combs with pollen which is a very poor policy. For several years we have fed fall honey mixed with five to ten percent sugar syrup to prevent granulation. Results have been excellent. We much prefer it to sugar syrup and furthermore we have no marketing problem with the honey used for feed. Three men can easily remove the queen excluders, check the colonies for weight and feed the light colonies in six or seven yards in a day.

The colonies are wrapped in asphalt sheeting paper for winter. They are wrapped in pairs with a top and bottom entrance. No side packing is used but several ply of old asphalt paper saved from the previous winter is placed over the top of the colonies for insulation.

For many years we packed the colonies on the sides and top with straw; but owing to the heavy snowfall many of them were too warm. They used up most of their stores raising brood during the winter. When spring arrived they were boiling over with bees and short of feed. In this district there is no profit in raising a large number of bees during the winter. A colony of average strength with ample stores of honey and pollen early in April will usually be far the best colony at the beginning of the white honey flow.

Information Wanted

By Charles Mraz, Middlebury, Vermont

For the past several years I have been interested in collecting material on the beneficial and healthful properties of the various bee products such as honey, pollen, royal jelly, propolis, and bee venom. In my past 30 years of beekeeping, many interesting facts about these properties of bee products have come to light, accidentally or intentionally. Lately, my greatest interest in this research has been that with cancer.

It was many years ago I first heard the remark that beekeepers seldom get cancer, and strangely enough, there seems to be considerable truth to the statement. In my travels around to the different beekeepers' meetings I have come across some remarkable cases by persistent inquiry, and there is no question there are many more of these unusual cases where bee products or bees themselves in some manner have exerted a beneficial influence in cases of cancer.

It is a rather impossible job for me to personally go around the whole country to dig out these cases. If anyone knows of any, I wish they would please write to me, Charles Mraz, Box 127, Middlebury, Vermont. This material will be relayed to the Sloan-Kettering Institute for Cancer Research to better enable them to carry out their work along this line. If anyone comes across any of these interesting cases in the future, I hope he will remember to pass along this information where it may do some good. It doesn't matter how fantastic these stories may sound, just as long as they can be substantiated.

Blue curls in bloom. This plant blossoms in late summer and extends into fall. A nice crop of honey was harvested from this plant in California this past season.

From the Apiary Note-Book

By Clarence Tontz, Elsinore, California

Higher Per Colony Averages Needed

Last year many side-line beekeepers did not bother to move their bees from one source of nectar to another as has been the practice in the past ten years of relatively light rainfall. One beekeeper nearby who in previous years had moved his bees to the orange groves, then to the irrigated alfalfa territory, simply let his bees set this past season in their "brush location" of mountain sages, wildflowers, and wild buckwheat. He keeps his bees in good shape and his average yield in the one location was 175 pounds of extracted honey. On 20 colonies which he operated for bulk comb honey in shallow supers the average was 125 pounds per colony.

With costs of equipment and labor increasing each year in the operation of a colony of bees, it is imperative that the yield of honey per colony be at a high level and that a relatively good price is obtained for the honey. If you were to figure it out it probably doesn't cost you a dime more to operate a colony of bees that produces 200 pounds of honey than a colony that yields 20 pounds—that includes the extra work of extracting the honey from the more prosperous colony. When you consider the investment you have tied up in a poor colony as well as the labor involved you will be surprised at just how much you went in the hole by tolerating it in the first place.

I have heard the statement time and again from back-yard beekeepers and even side-line beekeepers (those who operate from 50 to 200 colonies) that they didn't expect "a whole lot of profit since they were having a lot of fun" with their bees. Also about as many times I have seen these same beekeepers go sour on their fascinating hobby because the bees weren't paying for their keep. Many of these beekeepers put in a lot of time and energy and even have their wives help them—all working many hard hours with no profit whatsoever.

Honey as a Sweetening Agent

When we started retailing honey,

jams, etc., here five years ago some of our customers began asking for jams, jellies, and preserves sweetened entirely with honey. Then, as now, we had to put out a lot of perspiration to keep pace with our inspirations and simply could not find time to experiment with honey-sweetened jams. We did manage to contract with a local housewife to make orange marmalade and apricot preserve sweetened entirely with honey. When making the apricot preserve she opened the pits of some apricots and removed the meat or kernel. These she sliced and roasted. When the preserve was ready to pour into the jars she mixed in some of these slivers

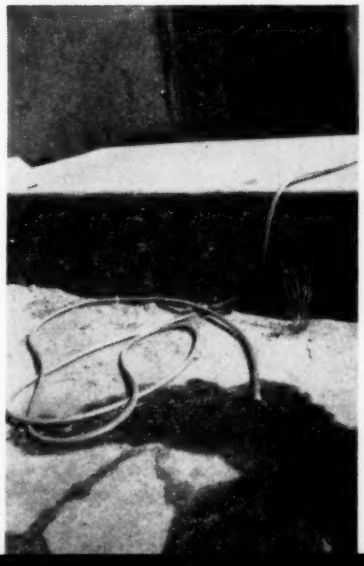
Short cuts to better beekeeping is reading what the other fellow is doing and attending meetings.

of roasted kernels. Both of her honey-sweetened products were delicious and looked very attractive in the 10-ounce jars in which they were packed.

In a short time she was hard put to supply the demand. Then several months later her husband became quite ill and she stopped her work of making the honey-sweetened products altogether. We still have customers coming in and asking when we will

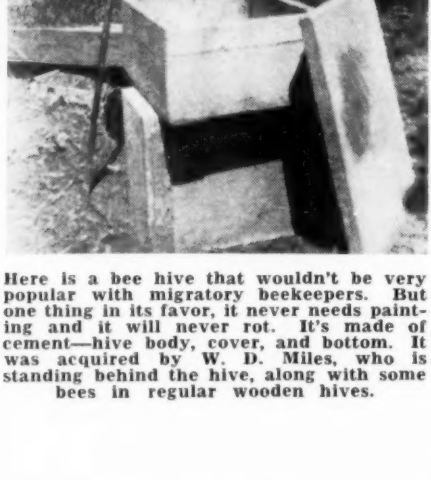
A prominent commercial beekeeper of Southern California, I. C. Anderson of Lemon Grove, poses beside his truck with Mrs. Anderson.

again have "that delicious honey-sweetened preserve." In the past year we have contacted several small commercial packers of jams and jellies with a view to having them pack up some products sweetened entirely with honey. Most of them were indifferent. One of the packers stated that around 20 years ago he did put out jams entirely sweetened with honey but that it enjoyed only limited sales because the flavor of the honey interferred too much with the true fruit flavor of the jam.



Here's a simple way to empty a vat of water that doesn't have a drain. Siphon it off with a garden hose.

Here is a bee hive that wouldn't be very popular with migratory beekeepers. But one thing in its favor, it never needs painting and it will never rot. It's made of cement—hive body, cover, and bottom. It was acquired by W. D. Miles, who is standing behind the hive, along with some bees in regular wooden hives.



Another view of the cement hive all set to catch a swarm of bees.

There is on the market today several varieties of jams, jellies, and preserves that are partially sweetened with honey and the balance with dextrose. Other products of this firm are partially sweetened with honey and the balance with brown sugar. We handle these products in our store and the usual reaction of the customer who is looking for a jam entirely free of refined sugar is that the label does not state just how much honey is used as the sweetening agent. Most of them comment that undoubtedly very little honey is used. In short, the product does not sell well and we are closing out the stock on these items.

There are many obstacles in bringing out a varied assortment of jams, preserves, and jellies sweetened entirely with honey, but there is no doubt in my mind that they can be overcome. Honey-sweetened products tend to be rather thin or "runny". Also honey tends to darken up the fruit, making it unappetising to look at even though it does have a good taste. Perhaps we will have to take the advice of the adage of "if you want anything done right do it yourself." We do hope to be able to produce some really delicious jams sweetened entirely with a good grade of honey in the near future. This type of product, of course, is mainly demanded by people who use little or no refined sugar in their diet.

Different Honey Containers Needed

I think I could sell a lot more honey if some one would manufacture a honey can just one-half the size of our 60-pound can. We encounter many customers who tell us their family is just too small to warrant buying a 60-pound can of honey. Others, especially elderly people, tell us that a 60-pound can of honey is just too heavy to handle. We could take a tip from the turkey industry, for example. They greatly increased the sales of turkeys by splitting a dressed turkey in two and offering half turkeys to the customers. The idea was an immediate success. And while we're on the subject of containers I would like to find an oblong metal can in which to pack chunks of cut comb honey for shipping. The top, of course, should be almost completely open and sealed with a round lid such as is used for the five-pound pail.

Let the Queen Tell You

By Alfred E. Hoey, Maxwell's Walls, Kells, Ballymina, Co. Antrim, N. Ireland

Summer in Ireland — and a day to entice the fairies out to dance long before the moon rose. The sky was cloudless and a haze mellowed the hills into smooth, faint lines. Slemish, where, as a boy, St. Patrick herded swine, blended, almost invisibly, with the blue hills of Antrim.

Replacing the roof on the hive, I took off my veil and wiped the perspiration from my face. The shade from the hawthorn tree looked most inviting. So before tackling the next colony, I decided to stretch out on the grass and have a smoke. It was pleasantly cool there, and as I lay on my back I watched the bees pass overhead on their way to the clover fields.

How lucky I was to be able to take it easy while others did the work! And my mind was at peace. My bees would not swarm, I knew, thanks to a little book I had come across. In it the author described a fool-proof method of swarm control. Failure, according to him was impossible. Well, that was just the thing I needed. No more cross-country runs for me. Never again would I stand, helpless, watching a prime swarm disappear over the sycamore trees.

As I lay on my back, gazing into the deep blue above me, thoughts drifted across my mind. Where did these thoughts come from? And where did they go when I'd finished with them? Queer thoughts, too, and with little connection. The experiments of Von Frisch, the honey flow, the flight of birds. But one thing seemed to be circling around in my mind. It was a remark which an American airman once made to me. "I get the feeling," said he, "that **anything** could happen in Ireland." If only that American had been here with me now we could have pursued the matter further. But it was really too hot for any deep thinking.

The Queen Speaks

Kneeling down in front of the hive I was just about to use my smoker when I saw the queen. She was walking to and fro on the flight board. As I bent nearer, she came to within a few inches of my face. She gave a shrill "peep" and then, to my astonishment, she spoke to me in a language I understood perfectly.

"I think I'll swarm today," she said. "No point in waiting any longer."

"For heaven's sake, don't do that!" I cried. "I haven't a spare hive about the place."

"Well, that's your worry. You think it's warm out here! Just try five minutes in there and you'll know, then, what heat is. The combs are actually melting."

"Now wait! I can soon fix that," I said. "Give me time. I forgot about ventilation but—"

"All right. You make my home a little more comfortable and I'll stay," she retorted. "But I'm going to tell you something. It's really a good joke. A week ago, my attendants and I decided to explore the hive. As I'd never been above the excluder, we hunted round and I got through. We had a grand time, for as we went higher we found we had lots of room. I stayed there in comfort for two days. But I never like to be idle and I was thinking of going down again to my work when my attendants and I decided to have our little joke. I laid patches of eggs in every vacant space. That super of drone comb was my favorite. Nice big cells and no crushing."

Just then a worker, with wings raised, came running angrily towards my nose. The queen said something, the wings dropped, and the bee scurried in again.

"Lucky for you," said the queen, "that I am your friend."

"But I did nothing to make her angry," I cried.

"No, not today, I know. But the last time you added two supers you crushed a dozen workers. Sheer carelessness. I may as well tell you that the others feel pretty sore about it. And until they forget, I'd advise you to look out."

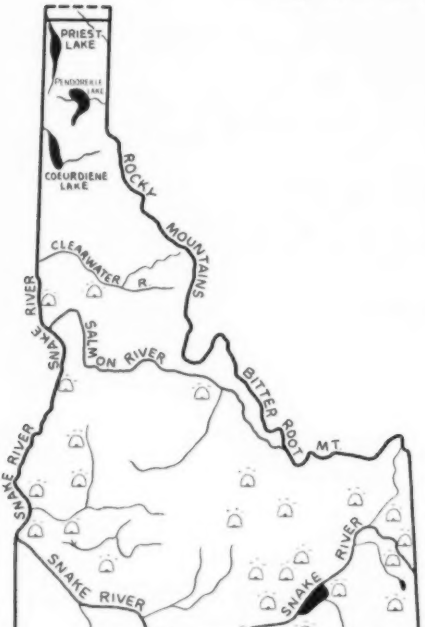
A drone came wheeling down, landed and rushed inside.

"I suppose he's going in to be fed," I suggested.

(Continued on page 379)

Beekeeping in Idaho

By O. S. Cox, Shelley, Idaho



State of Idaho

Idaho has about 150 commercial registered beekeepers with a total of over 175 thousand colonies and the 1952 production was 6,764,000 lbs. of honey. Of the 11 western states, it ranks second to California. Only about four or five of the beekeepers go in for comb honey production, and none for chunk honey.

Most of Idaho honey is produced in the southern part of the state with the Upper and Lower Snake River Valleys and the Boise Valley producing the majority. Successful operations of beekeeping are also carried on in the Bear River, Lost River, and Salmon River districts, along with Malad and in other sections. Probably the highest yields are in the Pan Handle Country of Northern Idaho, however, it has transportation drawbacks. Honey is produced at elevations from 3,000 to over 6,000, but mostly between 4,000 and 5,000 feet above sea level in the irrigated valleys. Very little is produced on dryland farms, or on grazing lands of the mountains. In some sections where wild Dutch clover grows, yields are fair. Most of the surplus honey is from alfalfa and white and yellow sweet clover.

Pollinization services are carried on to some extent in the Lower Snake River and Boise Valleys, and wherever alfalfa, clover, onion, and carrot seed are raised or in the fruit growing sections.

Most Idaho beekeepers winter their colonies by packing with paper, or straw and dirt, and bunched in single rows of eight to twelve facing east and south (because most winds come from the southwest and northwest), or else double rows back to back facing an easterly and westerly direction. They replace their winter and spring loss with two-pound packages and Caucasian or Italian queens shipped mostly from California at the beginning of the dandelion flow in the latter part of April and all during May; or else by dividing their bees and sending South for young queens. However, some beekeepers raise their own queens and those in the warm sections of Southwestern Idaho make their own increase or move their colonies to California for increase where they don't need to pack for winter.

Thirty to 40 years ago when beekeeping was pioneering in Southern Idaho it was common to get an average yield of 200 to 300 pounds of honey per colony. Now that waste land has disappeared with the intensive and extensive cultivation of irrigated crops, most ditch banks are pastured with livestock closed in with electric fences, and the majority of farmers cut their hay just as it starts to bloom, so that the average yield of honey is down to less than 40 pounds per colony. Thrip and weevil and uncontrolled spraying take their toll, too.

Most of the 600,000 people who live in Idaho eat honey and live in rural districts; hence in my observation the annual consumption per capita is much greater than that of the U. S. as a whole.

There are only two packers and

about eight beekeeper bottlers in Idaho; so with the small population, most of our honey produced is shipped out of the state. Our biggest problem is that of being too far from big market centers.

Mr. Orville S. Cox, Pres. Idaho Honey Prod. Asso. and Mr. Vernon Pendlebury of Blackfoot, Idaho, Vice-president.

Bees Present Problem in Orchard Grafting

By Richard E. Nieman, San Jose, Calif.

Bees present quite a problem during the grafting season by removing grafting wax from our newly grafted orchard trees.

We were unable to find a satisfactory bee repellent which we could use in the beeswax grafting compound. After trying asphalt and tar emulsions with no better results, we finally came upon a simple and effective solution.

Ordinary paper bags with small punched perforations were placed over the grafts and fastened onto the main stocks by rubber bands. The paper bags not only prevented the bees from removing the wax and exposing the grafts, but also helped to protect the new grafts against frost and from drying out. Small perforations in the paper bags afford a slight ventilation which helps condition the tender new growths to withstand exposure at a later date when the paper bags are removed and protection is no longer necessary.

Paper bag covers used to protect grafts in orchard from bees removing grafting wax.

Although ordinary paper bags successfully withstood moderate rain and wind, the use of waterproof bags would be preferable under adverse weather conditions.

Uncapping Machines and Their Problems

By E. J. Dyce, Ithaca, N. Y.

Over the years there has been a slow but steady improvement in equipment for uncapping combs. In the early days when honey was extracted in the apiary a sharp unheated knife was standard equipment. Since the honey was usually warm little difficulty was experienced in removing the cappings, extracting, and clarifying the honey. The invention of the steam and electrically heated uncapping knife, however, was a definite improvement over the cold knife. With the advent of large scale commercial beekeeping and the central extracting plant it soon became evident that even the heated knife as well as the plain were no longer satisfactory. For years the lack of suitable uncapping equipment has been the greatest bottle-neck in the honey house. Recent increases in the cost of labor have served to emphasize this fact. It is not surprising that much time and thought has been spent during recent years in an effort to develop an efficient uncapping machine.

Several machines have been invented which have been fairly satisfactory. Most of them use two heated vibrating knives similar to standard uncapping knives. The rest of them use wire brushes, wobble saws, and other types of cutters. With most of these machines each comb is fastened or locked in a jig to keep it steady during the uncapping process. Fastening the comb in the jig, lowering it down between the cutters, lifting it up again and removing it requires considerable work. Rather than go through all these motions many beekeepers believe it is simpler to uncap the combs by hand.

At least two uncapping machines have been developed which eliminate the work of fastening the combs in a jig. In one machine the combs are fed between two heated vibrating knives on an endless belt. This belt also carries the combs from the knives over to the extractors. In another more popular machine, the combs are fed down between two horizontal reels of narrow cutting fingers and are automatically released at the bottom of the cutters onto two chains. These chains carry the combs to the end of a rectangular tank ready to be fed into the extractors.

Both of these machines have greatly increased the speed of uncapping combs, but the increased volume of honey extracted has also created a clarification problem. Both machines have been praised and criticized for different reasons. Some claim that the machine which uses the heated vibrating knives does not handle Hoffman and other self-spacing combs efficiently or permit cutting deep into the combs. As a result, considerable hand work is needed to remove the cappings from depressed areas in the combs. Others claim that the machine which uses the reels of cutting fingers breaks up the cappings to such an extent that it is more difficult to clarify the honey.

Close to 100 Bogenschutz uncapping machines have been manufactured and sold and a number of beekeepers who have purchased them have been experiencing difficulty in clarifying their honey. Several buyers who have purchased poorly strained honey from these beekeepers have naturally been critical of the honey. Unfortunately a few of them as well as some beekeepers have been inclined to put the blame solely on the uncapping machine.

Beekeepers who have been experiencing difficulty doubtless have failed to gear their warming, settling, and straining equipment to the increased volume of the uncapped honey. Equipment which was designed to handle the honey from one or two hand uncapping knives is no longer adequate. Since beekeepers using these new machines often uncap 1000 pounds of honey an hour it is no wonder that many honey houses are not equipped to handle this large amount of honey.

The problem of removing fine cappings from honey is not a new one. Commercial beekeepers like W. L. Hodgson of Jarvis, Ontario, solved the problem years ago. The mechanical uncapper which he developed and has been using for at least 25 years breaks up the cappings in a manner similar

to the finger-type uncappers. Mr. Hodgson equipped his honey house to extract and clarify as much as five tons of honey in a single day. Those who have seen his plant in operation will agree that his bulk and retail honey packs are completely free of small wax particles.

The clarification problem has been handled successfully in different ways. Most of the beekeepers with this problem have installed a large hot room to warm the honey in the comb before it is uncapped. If excess moisture in the honey is also a problem, a hot room is the best place to remove it. Others prefer to uncap and extract the honey at ordinary room temperatures. After the honey is extracted it is run into a large baffle tank to trap most of the wax. The honey flowing from the baffle tank is then warmed to about 95 or 100 degress F. This procedure has given good results especially when care is taken to warm the honey slowly and uniformly. Higher temperatures, of course, decrease viscosity and hasten clarification but they should be avoided whenever possible. It is much better to use more or larger tanks and keep the temperature of the honey within reasonable limits.

The manufacturers of the Bogenschutz machine are well aware of the clarification problem and they are introducing this year a new type of knife which should increase the size of the cappings removed. The new knives are constructed in such a way that the cappings are cut rather than beaten off. Tests are also being made to determine the best speed to run the knives.

Many beekeepers warm the honey by running it over an elongated Peterson melter or over a long trough provided with a large water jacket below and throughout its entire length. The length and width of the trough should be based on the daily amount of honey extracted and should never be less than 10 feet long. It is always advisable to use a trough considerably larger than necessary. When a large heating surface is used to heat the honey the temperature of the water in the jacket need not be much higher than the temperature of the honey running off the trough. This precaution greatly reduces damage to the film of honey which clings to the hot surface of the heater.

Several beekeepers warm their honey by pumping it through aluminum or stainless steel coils immersed in water. Since copper, galvanized, and iron pipe react with honey they should not be used. Unfortunately many beekeepers use a pipe which is too large in diameter or not long enough. Honey is a poor conductor of heat and it is always difficult to heat honey in the center of large pipes unless very high water temperatures are used. A better plan, used by some beekeepers, is to p u m p the h o n e y simultaneously through three 50-foot coiled lengths of one-half-inch pipe. This plan usually provides ample capacity without the need of using high water temperatures. Some beekeepers who use coils fail to provide a method for removing or cooling the honey in the coils at the end of each run.

Some beekeepers place coils of pipe on the bottom of large galvanized tanks (commonly used for watering stock) or they construct water jackets below and around long, wide rectangular tanks with a baffle installed at the end of each tank. Such tanks should of course be made of stainless steel. If ordinary metal tanks are used they should be coated with an acid proof paint or lacquer, which will not react with the honey. The main point is to provide a large heating surface for the honey and it may be necessary to use two large heating tanks to obtain satisfactory results. Circulating water through the pipes or around the jackets of the tanks with a small water pump driven by a one-quarter h.p. motor increases efficiency in warming the honey. Live steam, especially under pressure, should never be used in the pipes or jackets as it is almost certain to damage the honey.

After the honey is warmed sufficiently most beekeepers run it through one or more large settling tanks provided with baffles before the honey is permitted to enter the final storage tanks. The room in which these tanks are located should be kept at a temperature of about 95 degrees F. It is important to have the tanks long, wide and shallow enough to give the particles of wax sufficient time to rise to the surface of the honey. If the tanks

are too small the speed of the honey flowing from one tank to another will carry the wax particles along and will not give them time to rise to the surface.

E. A. Hogarth of Tara, Ontario, has tested several methods of clarifying his honey. During recent years he has been using a series of six long, wide and shallow baffle tanks. The honey in the first tank is heated to 110 degrees F. By the time it flows by gravity to the second tank the temperature of the honey has usually dropped to between 95 and 100 degrees. If the room in which the baffle tanks are located is kept at a temperature of at least 90 degrees F., satisfactory clarification is usually obtained without straining the honey. The chief advantage of the settling method is the relatively small amount of time and attention required.

Most beekeepers, however, prefer to warm their honey, baffle it through two or more large settling tanks, and then run it through a large O.A.C. strainer or a strainer of equal capacity and efficiency. This procedure appears to be about the best for the average beekeeper to follow and this is the method used by W. L. Hodgson of Jarvis, Ontario. These ideas are not the only ones and there is still room for originality.

Another problem is to find the best method of handling the large amount of cappings which accumulate in the tank below the cutters of uncappers. A. L. Coggshall of Ithaca, N. Y., who operates a honey house on two floors, cuts a large hole in the bottom of his uncapping machine tank below the cutters. The cappings and honey run through this opening into round perforated metal baskets (about two feet wide by two feet deep) supported above a large stock tank. After the cappings are drained the baskets are set into a whirldry to remove most of the remaining honey.

B. B. Coggshall of Groton, N. Y., who operates a honey house on one floor, installed a large metal screen a few inches from the bottom of his uncapping machine tank which is provided with a baffle to permit continuous passage of honey. When the uncapping machine tank is drained at the end of the day the cappings accumulate on the screen and are permitted to drain over night before being removed.

Some beekeepers shovel the cappings from the machine into a large bin to drain or place the cappings in deep supers or boxes with screened bottoms. These boxes are usually moved to a warm room to drain. The temperature of this room is often kept at 130 degrees F., which is warm enough to facilitate drainage and yet not hot enough to melt the wax. A few beekeepers remove the honey from their cappings in a whirldry, or in a capping press. A couple of beekeepers in the western states simply run their cappings directly through one or two large Brand melters.

Some beekeepers in this State have purposely set their finger-type uncapping machines to cut deeper into the combs than normal. They believe that the bees easily produce more wax than they need to cap the honey and it would be a mistake not to take advantage of this extra profit. Some go as far as to say that the extra wax which they have secured during the past few years has more than paid for their uncappers. Of course, more specific work is needed to prove or disprove this contention.

Another criticism of the finger-type uncappers is that the outer cell walls of the comb are often irregularly broken. At first thought this might appear to be an objectionable feature. However, when the combs are returned to the bees it is claimed by several beekeepers that they build them back to normal more quickly than combs uncapped with an ordinary knife.

A few beekeepers have been inclined to think that the finger-type uncappers incorporate some air bubbles into the honey. None of the machines which have been in operation in New York State have shown this tendency if the honey in the combs is warm. The incorporation of air is more likely caused by running a honey pump too fast. This is a common fault in the majority of honey houses. Few honey pumps should be run faster than 35 or 40 revolutions per minute. If the honey is unable to flow into the pump fast enough to keep it full of honey a vacuum may be created by

the pump. When this happens air may be sucked in through the bearings or connections of the pump. When this occurs small air bubbles become thoroughly churned into the honey. Pumps running at excessive speeds often incorporate so much air in the honey that it is almost impossible to remove it even in a vacuum pan. It is much better to use a large honey pump and run it slowly.

A good way to tell if a honey pump is running too fast is to insert a T in the pipe leading from the source of supply to the honey pump. A small accurate vacuum gauge is then inserted into the upper part of the T. If even a slight vacuum shows on the gauge, the pump should be reduced in speed. To reduce friction, pipes leading to and from the pump should be at least as large in diameter as the openings in the pump. Elbows in pipe lines also create a great deal of friction and should be avoided whenever possible.

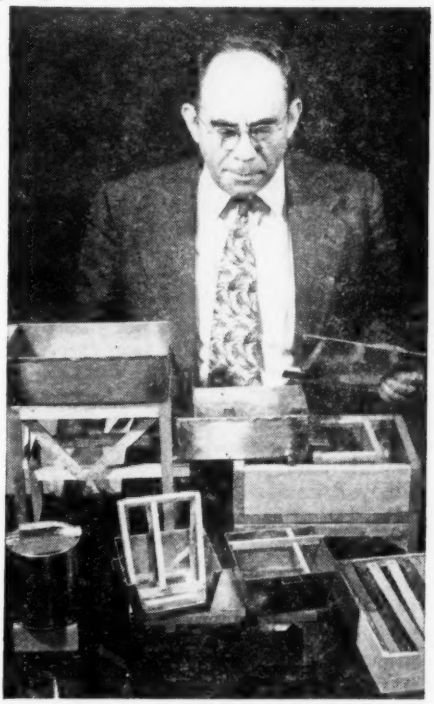
There is still room for improvement in mechanical uncappers but they are capable of eliminating the uncapping bottle neck in most honey houses. The increased capacity of these machines will normally create a clarification problem in honey houses with ordinary equipment. To our way of thinking uncapping machines are an important and necessary device in line with reducing costs of production. The installation of adequate warming, settling, and straining equipment will solve most of the problems created by these machines.

Programs for the 1953 Beekeeping Short Course Completed

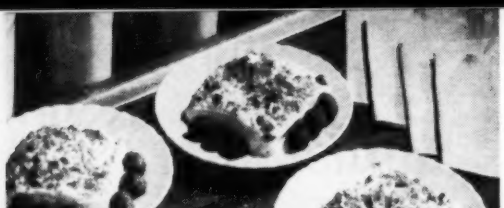
The 1953 Beekeeping Short Course, to be given at the Pennsylvania State College is set for the week of August 24 to 28 inclusive. The program will consist of: First, lectures on management problems from early spring management through the season to fall management, diseases of the honey bee, marketing of honey, care and uses of beeswax, and other topics. The lectures are given each morning which is the time of day when bees are most likely to be touchy; second, demonstrations and work with the bees in one or more of the six College apiaries and in the honey house. These demonstrations are given in the afternoon and illustrate in a practical way what has been learned each morning. The demonstrations do a great deal to make the course complete and interesting.

Movies or slides are presented each evening. They have to do with honey plants, activities of the bees within the hive, and pollination. Artificial insemination of a queen is demonstrated one evening. The results of the latest research work at the College are also presented during the course.

A banquet on Friday evening completes the course. Rooms for those attending are available in the dormitories of the College or in private homes. A registration charge of $7.50 is made for residents of Pennsylvania, and $12.50 for anyone from another state. Those wishing to register or wishing a copy of the program should write to A. L. Beam, Director of Short Courses, Dairy Bldg., State College, Pa.—Edwin J. Anderson.



New model extracting equipment to be used by E. J. Anderson in discussing the subject "Care and Extracting of Honey" in the 1953 Short Course.



Honeyed Desserts

By Mrs. Benj. Nielsen
Aurora, Nebraska

Crusted honey almond cream. —Photo courtesy Kellogg Co.

Doesn't the crusted honey almond cream dessert, shown in the accompanying photo, look scrumptious? And it tastes just as good as it looks. Subtle flavoring—honey, vanilla, almond—it's crispy, crunchy topping, served with thoroughly chilled bright red raspberries offers a treat to make the family sit up and take notice, and make guests ask for the recipe! You could use strawberries which are coming on now in abundance. Chill them thoroughly, then dip in honey just before serving. Nothing surpasses fresh fruits treated with nature's golden sweet!

If your family likes lemon flavor at all, it won't fail to approve most heartily of this luscious lemon pie. It's a super honey!

The honey-filled angel cake makes an exquisite center piece ringed with greenery and flowers of the season tucked here and there amid the green ring and perched lightly atop the cake, just before serving. Individual gladioli blooms are particularly lovely for this purpose. The inside? I leave it to you—try it!

And don't forget to serve plenty of honey sweetened iced tea and lemonade during the hot summer days ahead.

Crusted Honey Almond Cream

One tablespoon unflavored gelatin, 1¾ cups milk, 2 eggs, separated, ⅛ teaspoon salt, ½ cup honey, ¼ teaspoon vanilla, ⅛ teaspoon almond flavoring, 1½ cups oven-popped rice cereal, ¼ cup chopped nutmeats, and 1 tablespoon melted butter.

Soften gelatin in ¼ cup of the milk. Heat remaining milk in top of double boiler over boiling water. Beat egg yolks with salt and ¼ cup of the honey. Slowly stir some of the hot milk into beaten yolks; return to double boiler and cook until mixture coats a metal spoon. Remove from heat; stir in softened gelatin. Chill until mixture begins to set. Beat egg whites until stiff but not dry and fold in honey a tablespoonful at a time. Fold into custard mixture with flavorings. Pour into a shallow 8 x 8 inch pan which has been rinsed with cold water. Crush cereal slightly; mix with nutmeats and melted butter. Brown in oven. Sprinkle over pudding. Chill until firm. Cut into squares to serve. Yield: 9 servings.

Honey Lemon Meringue Pie

Six tablespoons cornstarch, 1⅓ cups water, 1 cup honey, 3 egg yolks, 3 tablespoons butter, 4 tablespoons lemon juice, 1 tablespoon grated lemon rind (optional), 3 egg whites, ¼ teaspoon cream of tartar and 6 tablespoons sugar.

Dissolve cornstarch in water and stir in honey. Cook over moderate heat, stirring constantly, until mixture comes to a boil. Keep on fire one minute longer, stirring constantly. Pour half of mixture over beaten egg yolks, stirring, and then pour this back into the mixture in the saucepan. Boil one minute more, stirring all the time, then remove from heat. Stir until smooth, then blend in butter, lemon juice, and rind. Pour into baked pie crust and top with meringue. Beat egg whites with cream of tartar until stiff but not dry. Then add sugar gradually beating constantly. Pile on filling, place in 400-degree oven and cook until brown.

Angel Charlotte Russe

One tablespoon gelatin, ¼ cup cold water, ¼ cup hot water, ½ cup honey, ¼ teaspoon salt, 2 cups cream, whipped, 1 teaspoon vanilla, 12 marshmallows, cut in small pieces, 2 tablespoons maraschino cherries, ½

(Continued on page 370)

Second Glances

C.M. Isaacson

Deep section holders for comb honey production are not new, but can be reasonably satisfactory in many cases (page 265). With drawn combs on the outside in the full-depth supers, the bees will be much more apt to begin work and not start swarm cells. The follower boards that Mr. Kosanke uses in his brood chambers do serve a useful purpose in making it easier to remove frames **after** one board is removed. But are they also not glued in place by the bees at times? I have come to use only nine combs in a ten-frame hive body whether it is a super or brood chamber. It makes for faster work.

Spring pollen gatherers will often carry in substances which are of no use in brood rearing. Many have seen them busily trying to pack the smaller grains of sawdust into their pollen baskets. I doubt if John Hinches need worry about his bees developing a case of coffee nerves from the grounds they were carrying in, but it does show that instinct is not always infallible (as Allen Latham has said many times) (page 267).

The pollination value of honey bees is becoming more and more recognized. Cranberry and blueberry pollination is a bit out of the ordinary, and with the many problems the beekeeper has to face in this work, a fair rental price is essential if the grower is to keep on obtaining bees. European foulbrood, chemical poisoning, the fact that very little nectar is secreted by these plants, the hard task of moving into the bog areas during the hot weather—all contribute to discourage the beekeeper (page 268).

Insistence that our industry make itself self-supporting comes along with the 1953 Price Support program (page 272) and in the long run there is no doubt that this is wise. Unless we are to accept a permanently "crippled" condition, the crutches must be discarded as soon as possible. Beekeepers as a whole have not been supporting programs and organizations working towards that end (I must plead guilty in part myself). Let's try and do better when this crop comes in.

Bees are a fascinating hobby, as many a person has found out (page 274). One trouble is, however, that the hobby tends to outgrow its bounds and becomes a full-fledged business before one realizes what has happened. If Mrs. Black keeps on increasing a little longer she will find herself (willingly, I fear) in that condition. We wish her continued success and pleasure in her choice of hobbies.

A personality sometimes appears that is so strong that one, even though he has never met the possessor of it, feels a definite sense of loss when that person passes on. Such was my feeling when I heard of E. R. Root's death in his 91st year of youth—and such was his personality. Until his failing eyesight forced him to discontinue his active work, no man was "younger", despite the many busy and full years that were his. But, of course, it is also true that in all the things he has left behind, all the service, the kindness, and good will spread throughout the years, such a one does not die, even in his earthly associations. E. R. Root has joined the pioneers, whose work he helped to bring about and then carried on. May his memory be blessed.

A "long idea" brood nest for multiple queens sounds like a pretty fair idea at that, Propolis Pete. It would keep those supers from assuming that skyscraper look. But I wonder if most multiple queen colonies would be practical if used on a large scale. Does anyone know of beekeepers running any large numbers of these units year after year? If not, there must be a flaw somewhere (page 278).

Honey can enhance other flavors, if used skillfully, says Mrs. Nielsen (page 279). Her caution against recommending too large an amount in a recipe is a wise one—there can be too much even of a good thing! Once a user gets to **like** honey, there will be increasing amounts used, but until then it is best to go slowly for fear of surfeit.

An observation hive always attracts interest and so large and well designed one as Mr. Boykin shows in the photo would doubtless not only draw many

(Continued on page 378)

Live and Learn

By Propolis Pete

Here's how Pete's bees look in winter. The one marked x is the abandoned colony that lived through. Other unpacked stocks are just there for convenience in storage.

Swarming is a more timely topic for June than wintering, but this is the first chance I have had since unpacking time, so here goes.

Last fall, my bees on an average, were in better shape than ever before. A good fall flow had crammed the hives with honey, the queens looked good, they had nice clusters of big strong bees. If ever there was no excuse for bad wintering, this was it. As usual, it was an unusual winter, so I have a couple of things to report which I think will be of interest to you.

On October 28th, three of the hives were in good shape, but you couldn't call them excellent. What I mean is, they looked fine, but they were not quite as heavy as the best. I knocked together another one of my Rube Goldberg inventions and put it in place of the inner cover, with as much dry sugar as it would hold. Then the inner cover over that and the regular packing on the tops and sides. Today, when I unpacked them, they were in almost as good shape as the best.

The best, incidentally, were my six gold-plated hybrids. This is the first time in history that I have had colonies so strong when unpacked that they had to be given supers immediately. And as a side remark, I hope that their strength don't give them ideas about looking for greener pastures.

One hive that I requeened very late in the season was listed as dubious. There were not too many young bees at the time, and when the asters finished up there were only about two pounds of bees and say 20 pounds of honey. I also fitted it with a dry sugar feeder.

They were flying every mild day, and on February 15th I opened the packing and looked at the feeder. It was empty. I filled it and looked again on March 15th and on April 15th. It was empty each time. On April 30th I gave it a thorough going over, and found it stronger by far than when I packed it last fall. They must have been rearing brood all winter judging by the population, and needed a second body at once.

That mild winter with a lot of early brood rearing sure knocked those big stocks of honey for a loop. Only two of the hives had any amount of stores left, and they were the weakest this spring. I think that this is proof of the amount of honey used in early brood rearing. Apparently these two queens are on the way out, and couldn't keep

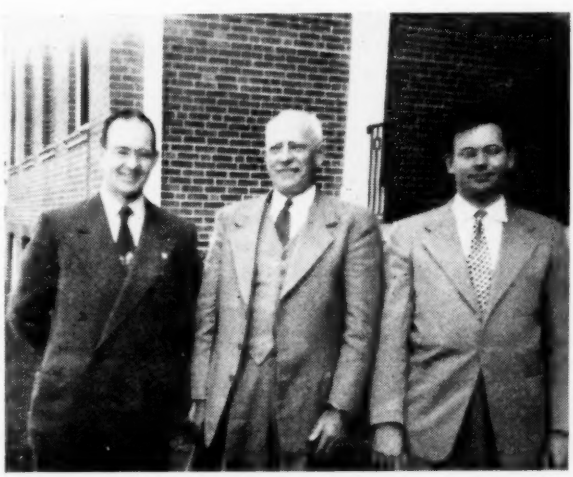
up the pace required of top notch egg layers. The strong hives are poor in stores right now, but the fruit bloom is coming on heavily, and unless bad weather keeps the bees in, I think that they will be all right. I have no scale to weigh a full colony, but give a good guess that some of those colonies that are now destitute had 75 pounds or more of honey on November 1st.

As usual, I had one hive that was just the opposite of all the foregoing. Anything to make a liar out of me, or to prove that a beekeeper should never say for sure that the bees are going to do this or that.

This colony didn't have a chance to survive when I packed last fall. At least that is what I thought. In spite of the good fall flow, I don't think that there were more than 10 pounds of honey, but there were about five pounds of bees. Why they didn't do better on the late flow, you'll have to figure out for yourself. The bees looked old, and it could be that a late supersedure didn't give the new queen a chance to produce. I couldn't see feeding them all winter. I didn't have a colony that needed bees, excepting the one mentioned earlier, and I didn't want to upset my experiment there. I couldn't see the logic of putting a lot of old bees into a prosperous colony, because they would all be dead of old age by spring, and would simply use up honey that could be put to better use. So I just left them; didn't feed and didn't pack.

Around the middle of March, on one of the very rare mild sunny days that we have had, there was a good flight from the entrance of this hive. I marveled that they were still alive, and did a little pre-season beekeeping. There was a patch of brood about three by four inches on two facing combs. There was no honey excepting a patch of dry crystals about the size of two postage stamps. The bees had sucked out the honey, and were working on those crystals. Then I saw the queen. For a poverty stricken monarch, she sure looked like a Queen. Yep, you win. I did it. I put on a feeder, if for no other reason than to reward them for their courage. Today I looked again, and there isn't any honey, the feeder is still going, and there are three frames of brood.

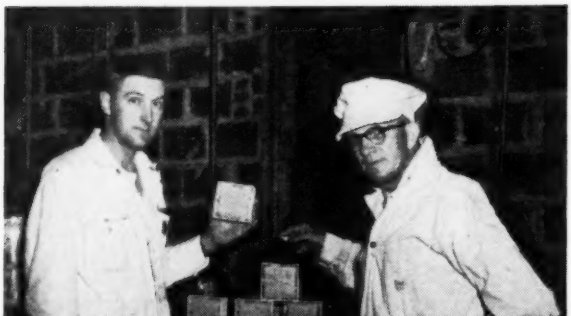
The sad part of it is that I may have to do something drastic with that colony. Weak as they are, they try to tear me apart when I open the hive. Maybe they'll gentle up when it gets warmer. Maybe they are so used to fighting for their pitifully small stores that it has become second nature. They cannot be the offspring of the present queen, and the new generation might be milder. Anyway, they are entitled to get a little mad at the guy who left them to fight it out alone all winter.



Left to right, W. A. Stephen, Extension Beekeeper for North Carolina; J. Richard Carr, Plymouth, N. C., past president of North Carolina Beekeepers' Association; and Eugene B. Finch, Sec.-Treas. of Association. Picture taken by Jack Deyell at a recent spring meeting of the Association.

Modern Comb Honey Production Over Double Brood Chamber Hives

By R. L. Livermore, Belle Center, Ohio



R. L. Livermore and Albert Clagg, both active Ohio beekeepers.

Comb honey in sections is becoming a rather scarce item on the grocery shelves today, but 20 years ago it wasn't anything to see glass show cases full of beautiful and delicious comb honey in sections.

Our honey crops have changed but section comb honey hasn't changed at all. At a recent bee meeting which I attended I overheard two beekeepers talking about **comb honey vs. cut comb honey.** Well, if one has less than five hives of bees and wants to mess around with cutting combs and all the grief that goes with it, I say go ahead but remember, don't be so old fashioned that you can't produce section comb honey. You are living in modern times so produce comb honey the modern way.

I have produced comb honey for four years now over double brood chamber hives and have produced some real nice comb honey, too. I have used both the 4¼ x 4¼ x 1⅞ beeway sections, 28 per super, and the 4 x 5 x 1⅜ with 32 sections. I did not put any bait combs into the 4 x 5 supers this year as we were too busy at the time sections were being folded.

Strong Hives and Young Queens

I pick the strongest and better colonies for producing comb honey and the balance of the yard I run for extracted honey production. The lighter hives will build up and produce their share of extracted honey.

Feeding bees in my book is called a **necessary nuisance.** In place of feeding syrup I prefer to save frames of honey at extracting time to feed my bees. It's much easier to put a frame of honey into a hive than haul feeder cans and hot syrup to our outyards.

Supering and Manipulation

I plan on leaving these two-story hives without supers until the honey flow has had a good start of about three days' time and then I put on my comb honey supers. I like to put on two supers at once, but before these supers are put on I check for queen cells. If I find swarm cells I cut them out. I also reverse or change the brood chambers so as to get frames of brood in the top chamber and any combs of honey are put in the bottom chamber next to the bottom board. I

have never found any bees that would draw, store, and cap good sections if too much honey were in the combs just below the comb honey supers.

One should check these double brood chamber comb honey hives every six or seven days for swarm cells, and remove them. After two checks have been made I have very little swarming trouble and bees are usually working in the supers very nicely. Supers may be added as needed, placing new supers below the filled or nearly filled ones. I never super my comb honey hives too heavily as all I hope to get is about three good supers of comb honey per colony.

Removing Comb Honey

I use an acid board to run the bees out of the comb honey supers and very quickly place the supers on the truck. These should be covered up at once to prevent robbing. Just as soon as we get to the honey house the supers of comb honey are stacked on flats and are gassed with a small amount of Cyanogas to kill any bees left in the supers. The reason for this is to prevent any bees from tearing into the caps and spoiling the appearance of any good quality sections of comb honey.

I use the Cyanogas for two reasons, to kill the bees and to kill the **Braula Coeca** (bee louse). Last year was a good year for the louse, too.

Winter Stores

After comb honey supers are removed these double brood chamber hives will have their winter supply of honey and there is no worry of feeding these hives. If there is still a light honey flow on after the comb honey supers are taken off a shallow super of extracting combs can be added and I've seen the bees fill these supers if the flow permits. If you have a fall flow this is ideal.

A very strong populous two-story colony ready for comb honey supers. Weak colonies are no good for comb honey.

Comb honey helps to sell extracted honey, so let's try to put more of it on the market today. The clover crop in 1952 in western Ohio came mostly from alfalfa and was one of the lightest crops in years.

"The First Book of Bees"

Perhaps the most artistically illustrated book on bees ever printed has just come from the publishers, Franklin Watts, Inc., 699 Madison Avenue, New York 21, N. Y. This book, written especially for children, is by Albert B. Tibbets, and the illustrations are by Helene Carter. The illustrations alone are worth the price of the book. The text is simply written, the author carefully avoiding long words so far as possible and keeping his sentences short.

This is a book that may be read in less than an hour although its chief value will be for children to whom the text under the interesting headings may be read over and over. There is a unity in these headings and there is also just enough of mystery in many of them to arouse interest. Here are the first few:

"Bees are Always Working", "Each Bee Helps", "Many Chores for Worker Bees", "Bodies with Built-in Tools", "Armed Guards", "Air Conditioners", "Housekeepers", "Bees are Builders Too".

The book is made up of 68 pages but there are nearly a hundred beautiful illustrations, some in color, and all most artistic. Price $1.75.

Editorials

Gleanings Has New Type Face Like a salesman with a new car or a new suit of clothes, a periodical appearing with a new type face goes out with more confidence, more assurance. So, Gleanings points with pardonable feelings of triumph, even honest pride, to the more open type face used for the first time in this June 1953 number. For a comparison see both the new and the old on page 351. The upper part, certainly easier on the eyes, is the new; the lower part, heavier, more solid looking and harder on the eyes, is the old. The new looks less crowded but there are as many words in a column as in the old,—actually a few more.

Since Gleanings is edited and printed by the same organization, we can take advantage of new improvements as they become available. There are many favorable signs for the future of beekeeping. We are happy to be able to point them out from time to time on brighter, cleaner looking pages.

* * * * *

Honey Better than Syrup for Bees Some years ago the feeding of sugar syrup (sucrose) in the fall to supply a deficiency in natural stores for winter and early spring bee food was quite common. Even today there are some who practice syrup feeding instead of reserving an adequate amount of good quality honey also pollen, for each colony. Some feed each colony 10 to 15 pounds of thick sugar syrup late in the fall to offset or correct the possible bad effects of late-gathered fall honey such as aster which may contain dextrine which is not good for bees confined for long periods during the winter. Such a practice appears to be justified, especially in the far north where bees have relatively few cleansing flights during the winter. The bees will use the syrup first, during the cold months and this food seems to be better than honey of inferior quality for bees confined to hives over long periods.

Some work done recently at Rothamsted, England, under C. G. Butler, appears to show that "sucrose syrup is not so satisfactory as honey as winter and spring food for bees but a mixture of honey and syrup proves to be satisfactory. The strongest colonies in April are produced by confining feeding to autumn and wintering bees on 35-40 pounds of honey or honey and concentrated sucrose syrup. The feeding of honey or syrup in spring may have a retarding rather than a stimulative effect upon colony development."

* * * * *

Honey House Sanitation At the recent national meeting in San Jose, California, a resolution was drawn up and accepted that set forth rules covering minimum honey house sanitation. The feeling was that the industry should take the initiative in setting up a set of workable rules since the Federal Government has the authority under existing laws to insist on certain standards of cleanliness in the preparation of honey for market. If enforced, these rules could work a considerable hardship, particularly to the smaller producer. With the Federal Government supporting the price of honey, the question of sanitation comes more into the foreground and the industry has been notified that some of our government agencies are giving considerable thought to the matter.

Unfortunately, many otherwise well-informed people are not aware of the vast difference between honey and milk as it relates to the growth of bacteria life. Honey normally will not support the growth of bacteria harmful to the human being, nevertheless all honey producers should make sure that the honey reaches the public in such a manner that it is free from all forms of contamination.

While the proposed standards drawn at San Jose may have some phases that need clarification to make sure that they do not work an unnecessary hardship on the smaller producer, a self-imposed set of rules would be far preferable to rules that might be written by a Federal employee who might not be too well acquainted with the problems involved.

Artificial Heat for Hives Ineffective In recent years a number of articles have appeared on the use of artificial heat thermostatically controlled for hives of bees during the winter and early spring.

Some queen breeders in the South have been interested in such heating equipment for their queen-mating hives early in the spring during cold spells. It seems probable that artificial heat in hives could serve a useful purpose, especially when queen cells are given to nuclei in queen-mating hives during cool weather. However, if the cool spell should continue for a time and the virgin queens did emerge from cells, they and the drones might not be able to leave their hives for a time, to take mating flights, due to the cold.

The main difficulty in supplying controlled artificial heat lies in the cost of equipment and electricity. If, however, the extra amount of honey or bees produced, justified the extra cost —all well and good.

The **Annual Report** for 1951-1952 of the Director of Experimental Farms Service Department of Agriculture, Ottawa, Canada, contains the following from investigational work conducted in the Apicultural Division:

"Contrary to the general belief among beekeepers, a normal colony of honey bees in a ten-frame Langstroth hive, supplied with ample honey and pollen stores, will maintain a more satisfactory developmental condition without, rather than with, controlled artificial heat. It has been demonstrated at the Experimental Stations at Brandon, Manitoba, and Ste. Anne de la Pocatiere, Quebec, that there is no advantage to be gained from artificial heating either in spring brood rearing or in honey production."

* * * * *

Factors Affecting Recrystallized Honey To insure the stability of crystal texture in recrystallized honey such as the Dyce process, the moisture content of the honey should not be higher than 18 per cent when the ratio of levulose to dextrose is above 1.4 to 1, reports G. H. Austin and C. A. Jamieson of the Central Experimental Farm, Ottawa, Canada. But in honey having a lower levulose to dextrose ratio, the moisture does not have to be so stringently controlled.

The scientists found that recrystallized honey which is not to be marketed immediately should be held in storage at 60 degrees F., or lower.

"Only those honeys that have a natural levulose to dextrose ratio of about 1.14 to 1 or less should be packed as recrystallized honey," Austin and Jamieson say. "This would include alfalfa, sweet clover, basswood and buckwheat honey. As a result, processors have a good selection of honey to use in a recrystallized pack. But any honey lacking these requirements is admirably suited for a liquid pack because the tendency toward crystallization decreases as the levulose to dextrose and moisture content increases."

Shelf life of at least four months may be expected from any honey having a moisture content of not more than 19 percent or a levulose to dextrose ratio of 1.14 to 1 or less, according to the Canadians. An examination of experimental samples showed no appreciable change in texture after six months of storage at room temperature.

"In samples held at 57 degrees F., throughout the experimental period no apparent change occurred regardless of the moisture content or the ratio of levulose to dextrose. Obviously, recrystallized honey should be held at 57 degrees F., if it is not to be retailed immediately."

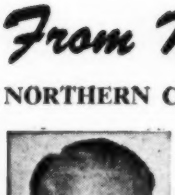
Decreasing the levulose to dextrose ratio of the honey studied resulted in a lighter-colored product. Austin and Jamieson believe that the lighter color is probably due to a more rapid, and therefore, finer crystallization taking place in the honeys with a higher dextrose content.

All of this information resulted from a recent evaluation of some of the factors affecting the stability of the crystal texture of recrystallized honey. The relationship between moisture content, levulose to dextrose ratio, and the breakdown of the crystal texture of recrystallized honey during storage, was determined with a new instrument called the penetrometer.

Reference: Austin, G. H., and C. A. Jamieson. Food Technology, Vol. 7, No. 2. Pages 95 and 96.

From North, East, West, and South

NORTHERN CALIFORNIA, Apr. 30



The Weather: This is a year of records for the weather in California as in most sections of the country. First, the driest January and February in over 100 years and then the coldest spot in April in more than thirty years. Continued frosts and one drop down to 26 did damage to the extent of several millions to fruit and nut crops. And then just when the pastures were all but dried up and farmers were irrigating their grain crops, along comes some refreshing rains, to ruin strawberries and some hay crops, but enough to add materially to the improvement of pastures. Rainfall for April in this section amounted to 2.25 inches for a total of 15.88 inches, just .13 inch below normal. More is forecast for tonight but if it comes, it will be accounted for in May.

Condition of Plants: The dry spring and unfavorable temperatures were most unfavorable for beekeeping in southern California as well as in the central and northern sections. Many colonies have had to be fed whereas they would normally have been self-supporting or have made a surplus. The citrus nectar flow was a failure in southern California this year and there will be a shortage of this fine honey in 1953 because the good crop gathered last year has been marketed. The April rains will help the thistle in northern California but are too late in southern California to be of any benefit to sage or California buckwheat. Manzanita yielded well in some of the mountain areas and is still producing at the higher elevations.

Condition of Colonies: Many of our colonies have cleaned up all of the old honey that was available in the corners of their combs and have gratefully taken what honey or sirup was given them. Package bee shippers have been feeding for sometime in order to keep their colonies in good condition for later flows or for pollination services. Swarming has been less prevalent in most sections. When bees use up all of their honey that usually accumulates in the corners of their combs, it is a good time to determine if all colonies are disease-free. Beekeepers have been fearful of the spread of AFB due to the crowding of many colonies in seed producing areas which has caused more extensive robbing than usually occurs. A season of short supplies, such as this, should show whether this fear is real or just one of those things all beekeepers must guard against in crowded areas. With a quarter of a million colonies devoted to pollination services and as many more scattered throughout the state, efficient apiary inspection becomes a **must on the part of every beekeeper,** and not just the apiary inspectors. If one allows 10 minutes to the colony for two inspections during the year, this would amount to 10,854 8-hour days for the inspection of 521,000 colonies. Quite a job.

The Value of Bees: Our State Entomologist, Mr. H. M. Armitage, calls attention to the need of efficient apiary inspection to preserve the services of bees as pollinators and conservatively estimates the value of bees to the agriculture in California as amounting to $100,000,000 annually at a rental to beekeepers of approximately $700,000. In addition there is the value of the honey and beeswax produced, and the value of package bees and queens or an estimated total—to the producer—of more than $5,530,000. It is not only a benefit to the industry but to all agriculture for the value of the honey bee to be recognized in this manner.

Mr. Armitage announced the appointment of Mr. Elbert Jaycox as the Supervisor of Apiary Inspection to take the place of Mr. H. M. Krebs who resigned to go into private business.

A Great Leader Passes: Word has just reached me of the passing of another of our great leaders, Mr. E. R. Root who is known throughout the world for his leadership during his

long and productive life. He lived to see the attainment of many of his objectives accomplished on the lecture platform, through the services of the manufacturing company established by his father and through the pages of ABC and XYZ of Bee Culture and Gleanings in Bee Culture. He was a man of high ideals whose chief interest throughout life was to improve in every way possible the welfare of those associated with beekeeping. He campaigned early for the establishment of a Pure Food Law to safeguard the purity of honey as well as other foods.

His services to beekeeping and to mankind were recognized by being given the honorary degree of Doctor of Philosophy by Ohio State University some years ago but he continued to be known affectionately as just "E. R." to many of his friends and associates. The records of his achievements will remain an inspiration to all. —J. E. Eckert, University of California, Davis.

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OREGON, April 30

Conditions: Bees wintered very well here and consumed very little food. The winter was mild here in the Willamette Valley, in fact, we had just a few flakes of snow which melted as soon as they hit the ground. Very few dead bees were found on the bottom boards when the first inspection was made this spring. The hive population now is much greater than in the past and the colonies moved into the orchards for pollination are in fine shape.

The Oregon Bee Law has been revised by the Oregon Legislature which has just adjourned. The fee now is $1.00 for registration and 15 cents per colony over six colonies. For example, if the beekeeper has six colonies, the fee is $1.00, and if he has seven colonies the fee is $1.15. The old fee was $2.00 for registration and 25 cents for each colony. In other words, if the beekeeper had one colony the fee would be $2.25. In moving bees the old fee was 25 cents a colony for each move and the beekeeper had to get a permit before he could move the bees. There is no fee now and the beekeeper does not have to get a permit, but after he makes the move he must report it to the Department of Agriculture in Salem within five days after the move. That is one thing that has come down in price, which is unusual when nearly everything is going up. Beekeepers deserve this reduction because some of them are having a hard time to make ends meet when the price of honey is so low and the cost of production is so high. The beekeeper is responsible for American foul brood in his apiary and if the inspector finds five percent or more foul brood he has the authority to condemn the entire apiary.

Miscellaneous: On April 3rd at 1:40 A. M. the Secretary of the Portland Beekeepers' Association, Mr. Everett Hull, was loading his bees on a truck to take to the apple orchards at Hood River, Oregon. The night being very dark, he accidentally fell off the truck and received three fractures. He was immediately taken to a hospital, released, and later had to return. He is getting along satisfactorily now, but it will probably be a month before he can return to his duties. Mr. Conroy who was helping Mr. Hull took the bees to Hood River.

On April 26th at about 8:30 P. M. I got a telephone call from the Portland Police Department to remove a swarm of bees from a bush on a lot located in the southeast section of this city.

As it had been raining hard for several days, I thought the police were kidding me but they were sincere, so I telephoned the lady living on this lot and was informed that the report was true. Being dark and raining I informed her I would call the next morning. I found the swarm as reported and put them in a hive containing some combs of honey. The bees were wet and were happy to have a new home. There were about five pounds of bees in this swarm. On the 28th I had another call to pick up a swarm and it was still raining. I did not know the bees would swarm like that when it was raining. I wonder what it will be like when the sun shines.

The Portland Beekeepers' Association is conducting a school for amateur beekeepers. The school is very satisfactory and there is a great deal of interest. In addition to the regular classes which are held in the evening of the second Friday of each month, field meets are being held from which the amateur beekeeper is obtaining practical instructions and information. There are about 120 students enrolled. —John F. Erickson, Portland, Oregon.

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COLORADO, May 8

Weather: How contrary can the weather be? Here a week of May is past and the only consistant springlike weather we have had was way back in February. It was little better in the part of California where I raise queens each spring. I got so busy feeding nuclei there that I completely forgot this report which should have been in last month. So, we can blame that on the weather, too. In reading the April and May issues it seems that no one had much winter, and we here in Western Colorado did not either, that is not until April. April was a heart-breaker, with scarcely a day fit to open a hive. And the season that was so open and so early is now 10 days late with scarcely a dandelion showing its head at this date. Most of our colonies, provisioned last fall with 60 to 75 pounds of honey, are now on feed. We will not know till more reports come in how many colonies starved in the area, but there are sure to be quite a number. The only compensation was the moisture that fell, but even that does not satisfy a hungry colony now.

Condition of Bees: Colonies are husky and hungry. If we soon get some favorable weather I believe Colorado will enter the main flow with enough good colonies to get a normal crop. The major threat to colony strength now is the occurrence of European foulbrood which has already begun to make its appearance in many colonies. But thanks to the work of Joe Moffett at the Experiment Station at Fort Collins we now have a weapon with which to fight it. Many of us are using streptomycin, and if we use it in time most cases can be cleaned up in time for the main flow.

Crop and Market: The size of the crop is still a big question mark, but since we always have had one it is logical to expect another—just how good, we will have to wait and see. The market is largely in our own hands. We know now what a promotion program can do. A producer-impelled promotion program can move within the year any crop of honey that we may be able to produce. The only thing we must do is DO IT. It will take organization, it will take work, it will take thought. But isn't that better than taking the support price from the government for our honey? It seems that producers all agree that the new support prices are not enough to get for our crop, they are barely the cost of production. All right, what are we waiting for? Let's get more! No one has honey to sell but us; we alone produce it; it is our job to see that it is sold well. I believe the machinery for another promotional program is already well under way. If you are not in it find out where you fit and get to doing your part. The government has agreed to help, but producer initiative is necessary. That is as it should be —no one has as much to gain from good honey prices as the producer himself. Packer resistance to higher price need be no great obstacle. This year the market is clean and we already have a fairly satisfactory level of prices. The fact that the support level is lower need not establish the market, supply and demand should do that, and what we need now is to stimulate a healthy consumer demand. We can all take part. States with organized marketing programs have the advantage in this respect, but each one can do something. The recent published letter of our Federation president, Henry Schaefer, states it quite clearly. Why not hunt it up and read it again?

With a normal production the government should not be asked to take one pound of honey from the crop. The support program should be a standby to use only in the event of an abnormally large production. — John W. Holzberlein, Jr., Meeker, Colo.

TEXAS, May 6

Weather: Texas generally experienced an abnormal amount of strong winds during April which dessicated the soil moisture and left vegetation in need of rainfall. Flowers suffered considerable wind injury and nectar yield was curtailed. Rainfall occurred toward the end of the month accompanied by hail and floods in some sections and tornadic disturbance in some widely scattered local points.

Bees and Plants: Honey plants which earlier gave promise of a spring honey crop failed to live up to expectation. With a generally mild winter and early spring, the bloom began earlier than usual. Pollen was gathered in considerable quantity and with liberal honey reserves colonies built up rapidly and attained the peak of bee population weeks before any major flow might be expected. There was some swarming and reserve stores were dissipated in maintaining strong bee forces. Minor nectar flows which normally would have sustained the colonies, failed to yield adequately. There was some loss from starvation and most yards required some feeding. In the Lower Rio Grande Valley good build-up of colonies was obtained from the citrus bloom, ideal for queen-rearing and package bee production; however, little surplus honey was obtained. In south Texas many apiaries were operated in brush locations with good prospects for a crop from mesquite, guajillo, and catsclaw. Drying winds retarded the nectar flow and seriously injured the tender blooms. Some infestation of the bloom by thrips was reported. Some surplus was obtained only in favored locations. In our immediate section, yaupon bloomed early and yielded little. No material gains were made from willow, huckleberry, and rattan. The colonies are light and at present bee forces are smaller than a month ago. With recent rain horsemint has improved and is expected to provide some nectar in the near future. Throughout the blackland area conditions were similar and considerable feeding was necessary. In most of this area there is an abundance of marigold. Wherever rainfall occurred the plants are in bloom and yielding some nectar. In the principal vetch area the crop is now in bloom; however, few apiaries have been moved in. Beekeepers who suffered losses from insecticidal poisoning last year are waiting until insect pests are under control before locating in that area. Beekeepers who suffered losses from insecticidal poisoning last year are waiting until insect pests are under control before locating in that area. There has been no infestation of pea aphids thus far and beekeepers are expected soon to establish their yards near the fields.

Miscellaneous: Beekeepers who had a quantity of off-grade honey on hand may count themselves fortunate this season when extensive feeding was necessary. Early season package bee orders have gone out in fair volume. Most of these were moved by truck direct by purchasers for their northern localities. In a season like the present when many of our better-known honey plants fail to come through as expected one cannot help but note the value of some obscure plant which proves of value when others fail. In this category belongs Carolina clover (**Trifolium carolinianum**). This clover grows rather abundantly in sandy and other poor soils in this portion of Texas. Throughout most of April bees visited this plant in large numbers and obtained sufficient nectar to support brood-rearing when other plants failed. —A. H. Alex, College Station, Texas.

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MISSOURI, May 3

Weather: During the past 30 days we have experienced very cold weather. On the 17th of April we had locally an inch of snow, with more farther north in the state. Peaches, that were in bloom then have been killed over most of the state and the apples are hurt considerably.

The bees have had very few days to gather nectar, consequently it has meant feeding. This has given us an opportunity to try out feeding dry sugar rather extensively. For one thing, in feeding ten yards of bees, this dry sugar feeding can be done in a lot less time than opening pails and feeding liquid syrup. Fortunately, March gave us enough warm days to inspect all our colonies, and the few with American foul brood were eliminated. Only those with a few cells of foul brood have been fed sulfa syrup. Feeding sulfa drug definitely will clean up American foul brood, but be sure and remove all sealed honey from the infected hive.

A few reports have come in from small beekeepers (who do not take good care of their bees) that their bees have died during April, due to starvation. As one beekeeper of 150 colonies remarked the other day, "There are a lot of bees in the hives, but very little honey." If Missouri beekeepers do not want to lose their bees, it will mean feeding, and possibly for quite a while yet, unless this weather changes soon.

European foul brood which was a problem with us a few years ago, especially in one yard, has almost disappeared. We found six cases this spring.

We Need More Comb Honey

Twenty years ago in selling our honey to retail grocery stores, we would invariably come across section comb honey in every store that had been shipped in either from the western or northern states. Today we do not find this situation, and we are wondering why? Of course, we are not acquainted with weather, management, etc., in these states, but we are of the opinion that if more section comb honey would be produced instead of so much extracted, that honey probably would not have had to be supported by the government during the past few years. I believe we beekeepers should do all in our power to alleviate our own situation. As beekeepers, I believe we are capable of doing this and by producing some of it in section comb honey, I believe the price of all honey would remain firm.

We have made money every year from our bees since going back to chunk and section comb honey production in 1948, and we do not have the high production, nor as light a honey as some of our western and northern states have, still we are not able to supply the demand for section comb honey, even that produced from fall blossom honey.

I know extracted honey production is simple as compared to section comb honey production (we produced extracted honey exclusively during World War II days, and know there is just no comparison in securing crops of extracted and section comb honey when it comes to management of bees) and there is a possibility that there are beekeepers who do not care to go back to section comb honey production for that reason, but if we want to better ourselves as an industry and not depend on the Government, which to me is a very poor way out, I believe beekeepers should consider producing a part of their crop in section comb honey.—Carl Kalthoff, Lexington, Mo.

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COLORADO, May 5

Weather: For the most part January was almost like summer. Winter returned for February while March was very changeable. April was no better than March with several days of sun, wind, rain, and snow all in the same day. So far May is the same as April. Even with such weather the amount of moisture fall and snow pack is below normal. This leaves us with the prospect of some shortage of irrigation water this summer.

Bees: With the periods of warm weather the bees started fair amounts of brood with the result that the colonies now contain a larger percentage of young bees than normally. Some beekeepers are finding the clusters small while other beekeepers find larger clusters. Because of the winter brood rearing colonies are running out of stores even though they went into the winter with above average stores. Some beekeepers are finding that spring feeding requirements will run into tons of sugar.

Crops: At this time the prospects for nectar-producing plants look better than last year. Sweet clover I believe will be considerably greater this year. If a shortage of irrigation water develops it may affect the nectar flow in the later part of the season.—Albert L. Crouse, State Apiary Inspector, Denver, Colorado.

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KANSAS, May 9

Weather: Beginning about June 15, 1952, there was below normal rainfall for the remainder of the year in Kansas. There were several inches deficient for the year. The past winter and early spring were also dry. During the early part of April some well-spaced small rains improved the moisture conditions but not enough to sustain vigorous plant growth without additional rains.

Plant Conditions: Plants last summer and fall did not become established because of the extremely unfavorable moisture conditions. Early and main fruit blossoms were frozen in mid-April on five successive days of hard freezes and those of about two weeks earlier. Minimum temperatures at those times ranged between 21 degrees to 23 degrees F. During the latter part of April redbud and dandelion nectar gathering was decreased by several days of cloudy cold weather. The next plants to bloom of importance to beekeeping will be the black locust, white clover, and yellow sweet clover at about the end of the month or first week in June. Plant growth and blooming is late this year due to dry, cold, cloudy weather.

Condition of Colonies: At the present time strong colonies which have had an abundance of stores earlier this spring are in need of food. Many colonies will be in need of stores during the remainder of May if they are to be factors in honey production from yellow and white sweet clovers. Food-collecting conditions this spring have been poor due to the freezes and poor flight weather. Swarm conditions prevail, this first week in May, in strong colonies but swarming has not taken place. Some colonies have 10 to 15 mature virgin queens captive in their cells while other colonies have indications of one or two such queens loose in the colony and the old mated queen not to be found. Adverse weather conditions have been a handicap to these colonies in swarming. What happens later is something else.

Honey Crop Prospects: In all probability there will be no bumper crop of honey produced in this state this year. The southern half of the state has had a short crop for two successive years and the soil is still without moisture reserve. The prospects are only slightly less serious in other parts of the state. If good rains, well spaced, should come in May, June, and July a partial crop could be obtained from the sweet clovers and alfalfa in the central and western areas of Kansas.

Miscellaneous: The proposed National Honey Show being sponsored by the American Beekeeping Federation and the Minnesota State Fair should bring some good publicity for honey. It is important that beekeepers make plans early for publicity concerning the sale of honey during October, 1953, and especially during National Honey Week in that month.

The Northwest Kansas Beekeepers' Association with headquarters in Kansas City, Kansas, has been sponsoring for several years 4-H club members in bee projects. This is a most excellent method to attract the younger generation to beekeeping. Association members with the aid of the County Agricultural Agent have had several bee projects in progress. — R. L. Parker, Kansas State College, Manhattan, Kan.

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TENNESSEE, May 4

Conditions: Winter was very mild and most colonies with plenty of stores reached their peak long before the honey flow which begins about April 25 to 28th. Many beekeepers were worried about having too much fall honey in the supers

in February, as some colonies had 50 to 60 pounds on February 1 but those same colonies were on the verge of starvation by April 1. This condition brought on the problem of swarming as well as feeding. Almost every colony has either swarmed or is trying to at this time.

Weather Conditions: The weather was very cool during the first part of April, temperatures reaching an all time low of 25 degrees and remaining there for a week. This also contributed to swarming. Fruit bloom was frozen and many colonies starved which otherwise would have survived. Feeding was necessary until April 25th when the flow started from crimson clover. Strong colonies which did not swarm have stored two shallow supers where drawn combs were used. None of this is sealed at this writing May 1. The flow from crimson should last 10 days longer followed by white clover and vetch. These should last well into June if weather conditions continue as they are at this time. Tennessee may have one of those bumper crops which we have read about but have seldom seen. It is very warm with plenty of moisture in the soil, making it ideal for a honey flow.

Plant Conditions: All clovers are in fine condition due to warm winter and the late freeze did not seem to hurt the clovers which is our major source in Tennessee.

It is too early to predict what fall plants will do. This will depend on the summer season. Let us hope we won't have the drouth that we had in 1952. —Leslie Little, Shelbyville, Tenn.

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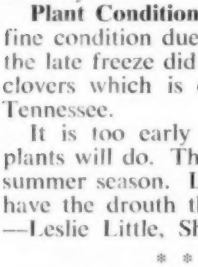
PENNSYLVANIA, April 24



The spring weather has been cold and damp. An occasional day or two of warm weather during the last month has given the bees an opportunity to gather some pollen and build up gradually. Colonies are much weaker than at this time for any of the last several years. Many colonies are now quite low in food supplies. Last year most colonies were gaining four to six pounds a day in weight at this time; now they are losing weight.

The past winter has dispelled for us, the old idea that bees use more honey during a mild winter. The bees in the southern half of Pennsylvania used less honey than for any winter I can remember. Several factors brought this condition about; first, the bees were short of pollen last fall and as a result raised less brood; second, even though the winter was mild, bees did not fly excessively; third, there was very little wind which I believe is an important factor both in safe wintering and in honey consumption. Each time I opened a hive in late March, I was surprised at the amount of honey still remaining in the hive. Now, however, due to cold weather for the past month, supplies are running low and some feeding is being done. The heavy rains are helpful in that they are putting the soil in good condition for a clover flow in June. The clover flow was almost a complete failure in 1952.

Supplies of honey in the beekeepers' hands are quite low for this time of year. The production was below normal last summer which gave beekeepers an opportunity to dispose of their surplus from the previous year.

Miscellaneous: I spent a short time studying the bottling of honey and the manufacturing of foundation in California last January. I was surprised to find so many bottling plants in or near Los Angeles. The neatness and cleanliness of most of these plants impressed me very favorably and I believe this condition constitutes a valuable bit of advertising for the beekeeping industry. Some of the bottling plants could be used as a dining hall with little or no scrubbing.

While writing this article, I received word of the passing of E. R. Root. When old names and faces of an industry such as ours are taken away, something intangible seems to be lost. It makes no difference whether they are or are not active at the time of their passing, their presence, while living, gives a balance to an industry as a whole that is hard to explain and their loss is felt for years to come. —Prof. E. J. Anderson, State College, Pa.

ONTARIO, May 9

Conditions: As mentioned in the last months' column we had an unusually mild winter. The pessimists shook their heads and predicted that we would get cold weather when we should have spring conditions, and for once, anyway, they were right. The past week, May 2nd to 9th, has been warm, with temperatures in the eighties, and growth has been rapid and vigorous. Farmers have practically completed spring seeding, and with a nice reserve of moisture from the April precipitation, germination of clover seed should be high. This weekend the country is a riot of color, as just about everything that blooms is showing off its spring finery. Roadsides, pastures, and golf courses are yellow with dandelions, while the sugar maples which bloom only every four or five years, are hanging with masses of creamy colored blossoms. So tremendous is the quantity of this maple bloom, that were the colonies at peak strength they would probably store a sizable crop from this source. Pellett in his book "American Honey Plants" mentions some 20 species of maple native to North America, all or most, sources of nectar and pollen.

With little bee mortality during the mild winter, colonies were strong in March and generally with sufficient stores. Brooding commenced early and has continued steadily, with a slight setback during the cold spell in April. The past week with summer temperatures and ample honey flow has sent the colonies booming again. Some are almost at swarming strength, and will have to be divided, or at least deprived of some brood and bees to avoid a swarming epidemic before the main honey flow comes on. Altogether I think Ontario beekeepers are justified in feeling optimistic over this year's crop prospects, if—, and there is always that great big IF.—

Miscellaneous: For the past several years beekeepers in Ontario have been rather uncertain as to their status in the eyes of the taxing authorities, that is, at the municipal level. The federal government classes beekeepers as farmers for income tax purposes. During the war the Price Control Board gave beekeepers the same privileges as farmers in the purchase of tires, automotive equipment, and other scarce but necessary items. However, the Assessment Act, which is on the statute book of the Province of Ontario, had been written a good many years ago, and did not clarify the beekeepers' position. As a consequence, some bright mind in the provincial Department of Municipal Affairs thought he saw the opportunity to wring some more tax dollars from a section of Ontario's citizenry, and accordingly instructed the county assessors to levy a business tax on beekeepers' honey houses. In some counties these assessments were levied and appealed by the beekeepers. In some cases the appeals were allowed by the local municipal councils.

In these cases a principle was at stake. If beekeepers could legally be assessed for business tax, so could green house operators, market gardeners, and other agricultural specialists. However, the whole situation has now been clarified in an amendment to the Assessment Act which states that,— "No person occupying or using land as a rooming house, farm, market garden, or for the keeping of bees for the production of honey, shall be liable to business assessment in respect of such land." — Allan T. Brown, Peterborough, Ontario.

Ernest R. Root

E. R. Root has answered Roll Call,
Left his friends here suddenly
In this lovely time, When Nature
Gives earth green and pristine Spring.
Mr. Root had oft aspired
To live out the century;
But the Master up in Heaven
Called him to Eternity.
There he'll write another volume,
Sequel to his XYZ,
While the angels hover ever
Over selfless souls as he.—H.M.G.

A Talk to Beginners — M.J. Deyell

"What is so Rare as a Day in June!"

The poet Lowell expresses in beautiful poetic language what many of us beekeepers feel but are unable to put into words, when we visit our bees on a rare day in June. When we see clear skies with perhaps an occasional fleecy cloud or a thunder-cap in the distance, and when the air is somewhat humid and warm with the mercury in the 80's, bees are likely to be working well if nectar is available. Beekeepers can usually tell by the feel of the air whether or not honey is coming in. When we perspire easily, bees are likely to be rolling in the nectar.

The Season of 1938

I may have mentioned this before in these talks but it was such an unusual honey season that I cannot forget it. At that time, the Root Company had four good sized apiaries in western Ohio. The honey flow started with yellow sweet clover the last few days in May. The alsike began to yield about a week later, then came the white Dutch clover, followed by white sweet clover which continued until the middle of July. Periodic rains kept the honey plants in good condition. However, a dry spell occurred from the middle of July until the last of August and during that time, alfalfa, which does not always yield in western Ohio, gave a considerable amount of nectar during late July and early August. That meant that the honey flow lasted between nine and ten weeks.

Beekeepers who knew comparatively little about apiary management but who did put on supers got a crop that year. We had colonies that occupied 10 deep supers. Some hives were so heavy with honey that the hive stands that were rotten or decayed, broke down under the load.

Queens had to work so hard, trying to keep up the colony populations, that a large percentage of them were superseded the latter part of the season. Strange as it may seem, little swarming occurred after the bees started harvesting the crop.

We have had some good seasons since but none to compare with 1938.

Jack Deyell

I wonder if I will ever see such a honey flow again. I hope so.

Dividing Strong Colonies in the Same Yard

This spring we had some enormous colonies of bees in double brood chamber hives. As a matter of fact, they reached their peak of strength a little too early in the season. It seemed necessary for us to divide these strong colonies, giving the queenless portions young laying queens. We set the upper brood chambers onto bottom boards, then gave these divisions covers. We reduced the hive entrances on the divisions set on the new stands because most of the old bees would return to the parent hives.

It is necessary to make sure that the divisions placed on the new stands have an abundance of honey. These colonies that were divided had an average of six combs of brood in the upper chamber and about four combs of brood in the lower chamber. The upper chambers had an abundance of pollen as well as honey. We found, however, that quite a percentage of the bees left these divisions, put on the new stands and returned to the parent stands. However, the divisions set aside had an abundance of capped brood and emerging bees. We did not try to find the queens in the colonies that were divided but examined the divisions five days after the dividing was done. We could easily tell which division was queenless by examining

the combs for eggs. In the majority of instances, the queen was in the upper chamber that was set onto a new stand, so it was necessary to introduce a queen to the division on the parent stand.

When dividing is done at least six weeks before the beginning of the main flow, it is possible to bring both divisions up to good strength and thus the honey crop can be increased considerably with a little extra labor, equipment, and the cost of extra queens.

After the surplus honey is taken off in the fall, the divisions can be united, placing the hives with young queens on top of the hives with the old queens. The young queen will usually be retained and the old one disposed of. Such populous, united colonies are likely to winter well and they consume less stores than would the colonies if left in separate units.

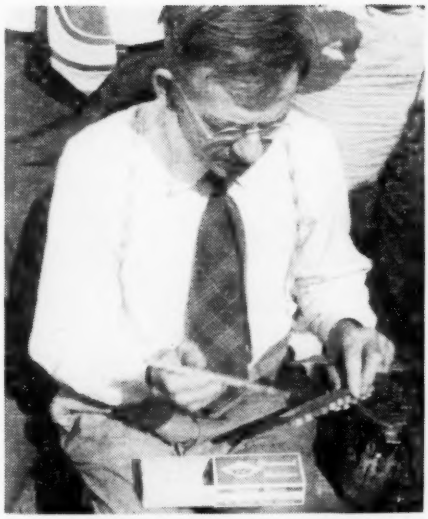
Some beekeepers in the Red River Valley practice this type of management each season. However, they winter each colony in a three-story hive, the upper story consisting of solid combs of honey, over the united colony. It is obvious that such a monstrous colony will need attention early in the spring, and so, the colony is divided at the beginning of the dandelion honey flow, placing the new division at the side of the parent colony. This division of the colony serves as a swarm control measure and gives the owner a chance to introduce a new queen.

This type of apiary management can easily be practiced by back lotters as well as commercial beekeepers.

Keeping Queens in Mailing Cages

I met a beekeeper the other day who said that he had received some queens in mailing cages and that the weather was so cool and rainy he could not introduce them. This is quite a problem at times, especially during the spring months.

Queens that are received in good condition can be kept for a time in a dark, cool room (between 60 and 70 degrees F.). It is well to supply a little water to each queen and her attendants, sprinkling a few drops on the top of the wire screen. Bees do need water.



C. G. Ellison, of Belton, S. C., demonstrating steps in queen rearing at one of the Clemson Short Courses.

Keeping Queens in Cages for Six Weeks

Some years ago we produced thousands of queens during a single season at our basswood apiary near Medina. We had a surplus of queens for a part of one season. In other words, the supply exceeded the demand. We hated to throw away perfectly good queens so we devised a scheme for storing them. As most of you realize, in commercial queen production it is necessary to remove young laying queens from mating hives periodically, in order to make room for cells or virgins that are coming along each day.

We converted an empty standard frame into a rack into which 30 laying queens were placed in dry cages. We put two of these frames with 30 queens each, into a queenless colony and gave it a slow steady feeding of thin sugar syrup. The queenless bees fed the queens through the wire screens. As a matter of fact, the queens became so full of eggs that they laid in the cages.

It was necessary to give each queenless colony a couple of frames of sealed brood periodically in order to keep up the colony strength. We had to avoid giving combs with eggs or larvae or the bees would build queen cells.

We wondered if these queens, after being kept in confinement for almost

A picture sent by Gordon P. Dillon, Sand Creek, Michigan, some years ago before apiary trucks were so common as at present. Mr. Dillon believed in using his pleasure car for service when necessary. Anyway, the car will carry a load of packages to an outapiary.

two months, would perform normally after being introduced to the colonies. So far as we could see, these queens were equal to younger queens that had been recently removed from queen-mating hives.

Is My Face Red?

In the May Gleanings, one of the writers mentioned my article in which I advised beekeepers to feed package bees sugar syrup by painting it on the screens of the shipping cages with a brush. This writer of the article thinks that this procedure is wrong because the brush would come in contact with the tongues of the bees and perhaps cut the ends of the tongues off. This writer was kind enough not to mention my name. I rather think he is right but I have never actually seen this happen. So please forget what I have said about painting syrup on the bee shipping cages with a brush.

I put some packages into hives during the past two weeks and simply poured some thin syrup through the cages laid on their sides. However, I aim to have a container of some kind beneath the shipping cage to catch the syrup that runs through the cage. I have seen pictures of syrup being poured on cages of bees laid flat with no container underneath to catch the syrup that runs through. A wash tub or some such container with two sticks placed across the top for the bee shipping cages to rest on, makes a good arrangement.

When putting in a number of packages, I place five or six cages on top of each other, flatwise over the two sticks, then pour warm syrup on the top cage, and it runs right down through (at least some of it does) and is caught in the tub below.

We have tried immersing a cage of bees in a container of thin syrup. A 60-pound honey can with the top cut out can be used for this purpose. I do not think that giving the bees such a big dose of syrup does them any good and perhaps may do them harm. I am not sure about this.

You will recall my mentioning a vicious colony that made life miserable for me when I fed it last November. I intended to give the colony a new queen this spring. Well, when I opened the hive the other day, I found a small cluster of bees and no queen. Apparently something happened to the queen last fall. I did not grieve over my loss. Those bees were just too mean to live!

Colonies in Single-story Hives

You will recall also, in my November Talk, that I mentioned wintering a few colonies in single-story Buckeye packed hives — just to see how they would compare with other colonies wintered in single-wall two-story hives.

As might be expected, those single-story colonies needed food this spring. The colonies were strong in bees although not so strong as some of the two-story colonies. I shall try to follow through on these single-story colonies to see how they compare with others

in the same yard, in honey production.

June, a Swarming Month

Swarming usually occurs at the beginning of the main honey flow, at least in this section of the country. It is well to keep ahead of the bees, if possible, by putting on an ample number of supers a little in advance of the time they are needed. If colonies become congested, they are likely to build queen cells and swarming will occur unless drastic measures are taken.

When I was producing honey commercially in northern Michigan, in the raspberry area, I did not know as much about controlling swarming as I think I know at present, although I still have a lot to learn.

The beekeeper from whom I bought the bees was a comb honey producer, one of the best in Michigan. I produced some section comb honey that season and clipped the wings of each queen. This beekeeper told me a "trick of the trade" that worked well. He used some small cages made of wire screen, cut four-inch square, then rolled up into a cylinder about one-half-inch in diameter. One end of the cage was bent over and the other left open until used. He would put four or five of these cages in his hip pocket, and as the swarms issued from hives along in the forenoon, he would catch each clipped queen at the hive entrance, put her into the cage, fold the end over to keep the queen in, then shove the cage into the hive entrance, then put a stone or weed on top of the hive to mark it until the swarm would return and he had time to work the hive. One morning I had five swarms out at once. The swarms returned to their hives because the queens had been caught and caged. Each brood chamber was examined and one queen cell was left, after destroying all of the others. The caged queen was put up in the top super. In due time a virgin queen would emerge from the cell left in the brood chamber below and a little later would mate and begin laying. If the old queen caged in the top super had not outlived her usefulness she would be used. I have left such queens caged for over a month. The bees will feed them. This is a trick of the trade worth knowing, especially by those who produce section comb honey.

Mr. Kenneth Farner of Flint, Michigan, produces both comb and extracted honey in this nice-looking apiary.—Photo sent by Bert Martin, Lansing, Mich.

American Honey Institute News Notes

By Harriett M. Grace, Director
Commercial State Bank Building
Madison 3, Wisconsin

When you start toying with the idea of advertising your honey this summer, why not wipe the slate clean of all the hackneyed phrases and trite expressions often used by advertisers? For instance, let's drop "wonderful, delicious, nutritious" from our vocabulary and start all over again with a new set of superlatives.

This will not be as hard as you might expect. We know that when we advertise, we should point out **that** quality in our product that sets it off, that makes it different from any other. Honey is resplendent in unique characteristics. Let's capitalize on a few of them.

Can you imagine, for example, the effectiveness of a banner strung across a large display of honey jars, bearing the words, "One of the first foods known to mankind." That's a new thought—a different idea. And how many foods can boast of such a virtue?

For honey was one of the first foods used by man to refine his daily living and start the dawn of civilization. So precious was it considered, in fact, that honey became the standard of barter, and early man often chose his wife according to how much honey she could offer in her dowry.

Imagine the "shock" value in this little story when it is utilized in advertisements. By "shock" value we mean simply the impact it will have on readers. It will make them pause and reconsider what they have read. It will make them think, "Why, I didn't know that!", and go away with the smug thought that now they had gained a bit of information which would be easy to spring upon someone else.

Here is another good honey virtue that can be claimed by honey and honey alone. This has real advertising worth. "Spare your stomach — eat easily-digested honey."

How many folks do you know who complain of indigestion, of this and that food that doesn't agree with them? How many people have food allergies? How many people are dieting? How many are suffering from one illness or another that prevents them from eating indiscriminately?

Everyone of these food-conscious people will welcome the information that honey is more easily digested than sweets containing large amounts of sucrose or cane sugar. And you will be surprised at the number who did not know of this honey characteristic. It is well worth bragging about.

One of the most common methods of differentiating one food from another is to tell the public of the food's uses through recipes. This is a common method because it is one of the most effective methods. And here honey can shine. It is all too universal an idea that honey is good only as a spread. But every beekeeper and his wife know that honey can work wonders when used as a cooking ingredient.

Here the American Honey Institute enters the picture. The thousands of thousands of honey recipes that the Institute has spread over these United States have sold countless tons of honey. This sort of advertising, of course, can't be measured by saying that so many leaflets sold so many pounds of honey. The effect of recipes is indirect; it can't be measured numerically. That honey recipes do make a dent in consumer resistance is found in such tell-tale statistics that show that honey consumption per capita has risen since the American Honey Institute was formed.

You miss a good bet if you neglect to use honey recipes with your honey displays, if you forget to advertise the uses of honey to the cook in the family. Load your honey advertisements with these honey ideas—honey butter, honey baked in the center of a biscuit, honey and peanut butter mix, honey sundaes, honey over grape-fruit, honey meringue, and honey whipped cream over hot gingerbread, and so on and so forth and et cetera. Don't hide these ideas under a bushel; let them get out and earn you a living.

Every beekeeper knows that he can

buy honey recipe leaflets from the Institute at cost. We will send you a list of the available leaflets upon request. Our address? American Honey Institute, Madison 3, Wisconsin.

One word of caution: Get your order in early enough so you can distribute the recipes to your customers before the honey year gets too far under way.

"**Honey needs no refining** — it is good just the way the bees make it!" That is another slogan that will sell. Other sugars cannot make that claim, with the exception of maple sugar, which sells for such a high price that it cannot hope to capture the mass market. But honey is a reasonably priced sweet with the additional advantage of being a natural sweet. That combination is a ready-made dollar-getter.

At fair ground displays, in some stores, the idea of giving free samples of honey on a soda cracker or tiny biscuit works very well. You must have someone to man such a display, however, for the idea is to follow up the taste with a sale. A sign such as this would draw attention:

TRY IT
before you
BUY IT

So don't confine your descriptions of honey to how "wonderful, delicious, sweet, and nutritious" it is; everyone knows that already, and it won't persuade one soul to part with his hard-earned cash and buy your honey. But let the public know how honey is **better** than other sweets and listen then to your cash register jingle!

Utah entomologists and apiculturists have been investigating newer insecticides as they relate to adult bee death losses. Field studies are made when such insecticides are applied to the alfalfa seed crop during the period of bloom. Such research, conducted over the past six years by Dr. G. E. Bohart, F. V. Lieberman, W. P. Nye, F. E. Todd, M. D. Levin and Dr. G. F. Knowlton (pictured here) has formed much of the basis for alfalfa insect control recommendations as issued by the Utah State Agricultural College.

Just News

The **Westchester County Beekeepers' Association** will hold its next meeting at 2:30 p.m., Sunday, June 21st, at the home of Carlton E. Slater, 17 Bronson Ave., Larchmont, N. Y., just off Route 1. This will be our first outdoor meeting and a good program is planned. A guest speaker will be on hand with an interesting subject. A shallow super with frames will be given as a door prize. Visitors are always welcome. —Carlton E. Slater, Publicity.

* * * * *

The following members were elected to office by the **Connecticut Beekeepers' Association** at the annual meeting held April 18, 1953. President, William J. McCormick, 1464 North Ave., Stratford Conn.; Secretary, Mrs. Andrew Creevy, 1080 Huntington Rd., Stratford, Conn.; Treasurer, Edwin La Brake, Woodbridge, Conn. The next meeting will be held June 20th 1953, at 10:00 A. M. at residence of Edwin LaBrake, Woodbridge Conn. A variety of honey bees is expected to be on exhibit. The annual summer outdoor picnic lunch is held at this June meeting. Anyone attending brings a dish or baked goods to share with others as potluck. Coffee and cream is furnished by the Association. This meeting is one to be enjoyed by all who attend. Anyone who wishes to may come.—P. J. Hewitt, Jr., Chairman of Publicity.

* * * * *

Beekeeping Short Course at State College, Pa., August 24 to 28, 1953.

Monday, A.M. Registration
Monday P.M.
1:30 A Word of Welcome, Introductions
1:40 Announcements
1:45 Introduction to beekeeping terms
2:00 Secrets of the Hive — Edwin J. Anderson
3:00 Inspection of laboratory and equipment
4:00 Demonstrations on assembling equipment
Tuesday, A.M.
8:30 Making a Start in Beekeeeping — W. W. Clarke
9:15 Care and Introduction of Package Bees — E. J. Anderson
10:00 Colony Activities and Characteristics — George Rea
11:00 Spring Management — W. W. Clarke
11:30 Question period
Tuesday, P.M.
1:30 Work in Apiaries to observe —
a. condition of bees used for extracted and comb honey production
b. brood, queens, combs, queen cells, etc.
c. clipping queens
d. marking queens with colored paint
e. removing honey, by using three methods for comparison
Tuesday, Evening
7:30 Honey Producing Areas — E. J. Anderson
Honey plants of Pennsylvania, slides — W. W. Clarke
Movies, Story of the Bee — (Sound)
Wednesday, A.M.
8:30 Colony Morale and Swarm Control — E. J. Anderson
9:15 Management for Comb Honey Production — W. W. Clarke
1. swarm control
2. supering
3. removing super, etc.
10:00 Queen Rearing — George Rea
10:45 Requeening — W. W. Clarke
11:30 Question period
Wednesday, PM.
1:30 Demonstrations in College apiaries, of —
1. Shaking package bees
2. Introducing package bees
3. Transferring bees from a box to a movable frame hive

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The June meeting of the **Cook-DuPage Beekeepers' Association** will be held on Sunday June 21, at the apiary of LeRoy Stockdale, 123rd Street and Wabash Road, Palos Park, Ill. The subject will be "Getting a Crop" by William Judd, President of the Wisconsin Beekeepers' Association, one of Wisconsin's largest beekeepers operating about a thousand colonies. If he does not get 125 tons of honey a year he does not consider he has had a crop. Meeting starts at 1 o'clock sharp. —A. J. Smith, Sec'y.

* * * * *

The **Middlesex County Beekeepers' Association (Mass.)** will hold its next regular outdoor meeting at the home and apiaries of their past president, A. J. Baptiste, at Lexington Road, Concord, Mass., on June 27, at 2 P.M. Beekeepers in the area are invited to attend. Bring picnic basket and be prepared to stay all day and into the evening. The Association will furnish hot coffee and ice cream for members and friends. During the early afternoon they will inspect the new club hive that was set up at the last indoor meeting at Waltham in April which has been transferred to Concord and will be inspected to show further progress. It will be interesting to see how

many more frames of foundation have been drawn by the workers and how many more frames the queen has been able to work. This is not an experiment with "Middlesex" because they have done this for the past three years and the "Club Hive" is moved to each location where the monthly meetings are held. Many new or prospective beekeepers have been able to get the feel and idea of handling bees through this demonstration. At the last outdoor meeting in September some lucky "Club Member" will win the complete hive which in former years has grown to a brood body, a hive body, and a shallow super.—John H. Furber, Sec.-Treas.

(Continued on page 381)

Honey Ice Cream

By Walter Barth, Ithaca, N. Y.

Take a little cream, skim milk, condensed skim milk, sugar, honey, and a stabilizer—mix them together, apply a little magic—and presto, you have ice cream.

Although a magic ice cream show took place every day during Cornell's 42nd annual Farm and Home Week, March 23 through 27, only cane or corn sugar was used during the demonstrations. However, according to Prof. W. K. Jordon, dairy industry specialist, some honey could be used in the manufacture of commercial ice cream. He went on to explain the general methods of production, and included honey in the formula.

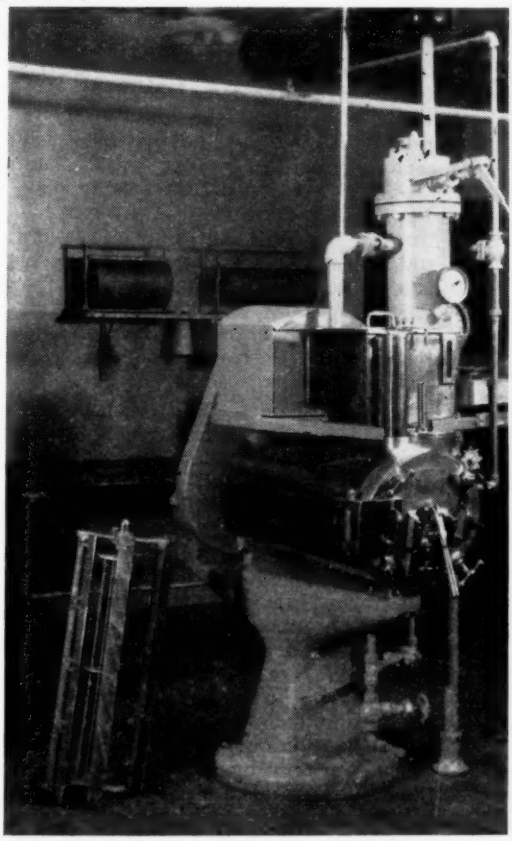
"Pasteurizing is the first step in the manufacture of ice cream," Jordon said. "Four hundred pounds of ingredients, that includes 120 pounds of cream, 127 pounds of skim milk, 83 pounds of condensed skim milk, 36 POUNDS OF HONEY, 32 pounds of cane sugar, and over a pound of stabilizer are poured into the pasteurizer. A temperature of 160 degrees is maintained for 30 minutes."

Next, the mixture passes on to be homogenized, cooled, and frozen. Then it is ready to be packaged and shipped to market.

Professor Jordon pointed out that state laws control the quality of the product. In New York State, ice cream must have at least a 10 percent butter fat content, and cannot contain more than five-tenths percent stabilizer.

"The difference between ice cream and frozen custard is that frozen custard contains egg, while ice cream does not."

Jordon also explained that the amount of non-fat milk solids used makes commercial ice cream smooth and creamy in comparison to the homemade product that is often coarse and icy. Commercial ice cream uses twice as many non-fat solids like condensed skim milk as the average housewife does. Unfortunately, condensed skim milk is not readily available for home use.



The ice cream machine capable of producing 50 gallons of the product.

Looking Ahead

By H. H. Root

One of my father's favorite words of advice to young beekeepers had to do with the loss of old bees which is a continuous process, and the need of thousands of young bees to keep up colony strength. He often used a colony of bees as an illustration to show the need of young blood in an organization.

Just after my brother's 90th birthday in June 1952, he spoke the words that we recorded on page 17 of the January number of Gleanings, "I hope that they will secure the best help available and that the interest of beginners, back-lotters, hobbyists, as well as commercial beekeepers, will be kept in mind. This, to the day of my passing, shall be my hope and my prayer". Due to my brother's failing eyesight and hearing, it had been impossible for him to be active during the past five years. We did not realize early in April, 1953, that we were carrying out wishes often expressed both by A. I. and E. R. Root.

Of late, Walter Barth, of Ithaca, New York, completing his studies for his Master's Degree, has been a frequent contributor to these columns. Learning that Mr. Barth wished, above all other things, to devote his life to journalism, principally as an entomologist, we invited him to come to Medina for a visit. About ten days before E. R. Root breathed his last, Mr. Barth joined the Gleanings staff as assistant editor. We are all happy to welcome him, for he brings the enthusiasm of youth, the technical knowledge of a thorough training at Cornell University (broken only by serving his term in the U. S. Army), and finally a practical experience acquired through several seasons' experience with Leroy C. Keet, Watertown, New York. In addition he was a deputy state inspector for New York. It is hard to imagine a better training that a man could have,—a happy combination of scientific and practical.

Mr. Barth will review interesting state and Federal bulletins, glean many a practical hint from foreign bee journals, supply technical information

Walter Barth

on complicated entomological problems, help keep us alert to all that is related to the treatment of bee diseases. During all this while, we hope that there will be enough propolis on his fingers from the operation of his own bees to help out in answering the hundreds of questions from Gleanings readers, thus carrying out the plan which A. I. Root anticipated in the very first issue of Gleanings, 80 years ago, January 1, 1873.

HONEYED DESSERTS

(Continued from page 346)

cup blanched, chopped almonds, and 1 large angel cake.

Pour cold water in bowl and add gelatin. Add hot water and stir until dissolved. Add honey and salt. Cool and when mixture begins to thicken, add to whipped cream. Fold in marshmallows, cherries, almonds and vanilla. Cut top from angel food cake and remove part of the inside, leaving a case with ¾-inch walls. Fill with fruited mixture, replacing top of cake. Cover with seven-minute frosting.

Honey Industry Council Elects Officers

The Honey Industry Council organizing committee composed of representatives of each of the existing national organizations met in Chicago on April 19 and 20th and elected officers for the coming year. By-laws were adopted outlining the purposes of the Council, membership, policy, and meetings.

Alan Root of Medina, Ohio was elected Chairman of the Council; R. B. Willson of New York City, Vice Chairman; Glenn Gibson of Minco, Oklahoma Secretary. Other members are Henry Schaefer, Wisc., Joaquin Watkins, Calif., N. C. Jensen, Miss., John Holzberlein, Colo., Leslie Little, Tenn., Robert Dadant, Ill., and Roland Stone, Calif.

The idea of a Council was born at the American Beekeeping Federation annual meeting in Chico, California, this year and a resolution was passed by the Federation authorizing participation in a Council if one should be formed. The American Bee Breeders also signified approval in their meeting at Chico. Later the National Honey Packers' and Dealers' Association approved the proposed organization and the Bee Industry Association did likewise.

Membership

The membership of the Council consists of four members of the American Beekeeping Federation, one member from the American Bee Breeders' Association, two members from the National Honey Packers' and Dealers' Association, and two members from Bee Industry (Supply Manufacturers).

Purpose

The purpose of the organization as outlined in the by-laws is to formulate and sponsor broad national policies essential to Industry welfare; to act in an advisory capacity to the Industry groups who make up the Council; to suggest and provide ways and means of raising funds not now being employed by the various segments of the Industry; to provide the necessary contacts with government officials in the furtherance of Industry benefits and needs.

Policy

The Council shall not take any action except upon the affirmative vote of more than two-thirds of the members present. Meetings shall consist of a regular meeting once a year and special meetings called by the Chairman or by the majority of the members so petitioning.

A Public Relations' Committee was named to carry on the Washington contacts to consist of Glenn Gibson, Henry Schaefer, Woodrow Miller, Leslie Little, R. B. Willson, and Alan Root.

It is hoped that through the efforts of the Council the work of all of the national organizations can be correlated and additional funds for carrying out Industry welfare can be obtained.

Part of The A. I. Root Company home apiary showing a scale hive. The late A. I. Root conceived the idea of having a grape vine beside each hive to furnish some shade from the sun.

Asked & Answered

Trips Necessary for One Drop of Honey

Question: We would like to know how many trips a worker bee will have to make to the field to produce one drop of honey?—Edwin G. Ramey, Texas.

Answer: Regarding the number of trips a bee makes to gather one drop of honey, we would say at least three trips are necessary. A bee will carry one drop of honey in its sac. Inasmuch as nectar is approximately two parts water and one part sugar, the bee would have to make three trips to the field in order to collect a drop of honey. The water in the nectar is evaporated by the bees after the nectar is placed in the cells of the comb. The bees fan the excess moisture from the nectar and drive it out of the hive.

* * * * *

Drones at Hive Entrance

Question: I noticed about three dozen drones clustered in front of the hive. I tried to stir them up and make them fly but they seemed lifeless. Is there something wrong with this hive? It has plenty of brood and honey and has wintered well.—Roye L. Strawn, Texas.

Answer: Regarding the drones clustered in front of your hive that appear to be lifeless, it seems probable that there may be a dearth of nectar in your locality at the present time. When bees fail to collect nectar they usually push the drones out of the hive and let them starve. On the other hand, when there is an abundance of nectar and pollen, the drones are tolerated. When the colony runs short of stores the bees will push the drones out of the hive and later they may remove drone larvae and carry it to the hive entrance, and if the food shortage continues, the bees will remove worker larvae from the combs and deposit it on the alighting board of the hive. It might be well for you to check on the food condition in your hives.

* * * * *

Package Bees Cluster in Empty Super

Question: I purchased two packages of bees this spring and installed them in the hive body as per instructions. I put an empty super on top to put the syrup can in and when I looked the other day, I found the bees had started to build comb from the inner cover down. What can I do to get them to work on the foundation in the lower section?—E. D. Sealer, Ohio.

Answer: Regarding your experience with the two packages of bees you recently installed, we assume that you placed the syrup can directly on top of the frames instead of over the hole in the center of the inner cover. When you place the can over the hole in the inner cover, the bees can easily reach the syrup but cannot occupy the space in the empty super above the inner cover. We suggest that you shake all of the bees now occupying the empty super, down into the brood chamber below and place the feeder can over the hole of the inner cover. If the bees have built some combs attached to the inner cover in the empty super above, remove these pieces of comb and place them near the hive entrance so that the bees may carry the syrup from the combs into the hive.

* * * * *

Telling Where a Swarm Comes From

Question: How do you tell which hive a swarm came from? You say put the new hive body on the old stand—which is it? My last swarm was of yellow bees (young) and the only colony I could find that seemed weak after the swarming were black bees.—R. E., Virginia

Answer: It is a little difficult when a swarm is found hanging on the branch of a tree in or near an apiary, to know definitely which hive cast the swarm. As a rule, however, some activity can be detected at the hive entrance. There are likely to be some drones walking around the alighting board of the hive from which the swarm issued. It is sometimes difficult to tell from observing the interior of the hive whether or not a swarm has left the hive. As you know, a considerable portion of the bees, especially the young bees, are left in the hive to take care of the brood. The old bees and queen constitute the swarm.

* * * * *

Prevention of Swarming

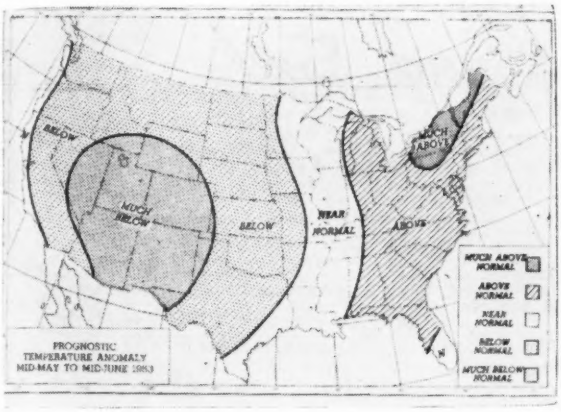
Question: Should I take all of the queen cells from the parent colony after a prime swarm issues in order to stop after-swarming? Does the parent colony have a queen when the prime swarm leaves? —John Bowles, Pa.

Answer: One queen cell (the finest looking one) should be left to requeen the parent colony. When a prime swarm issues in a normal manner the parent colony is without a queen except the unemerged virgin queens in the queen cells and if the cells are all

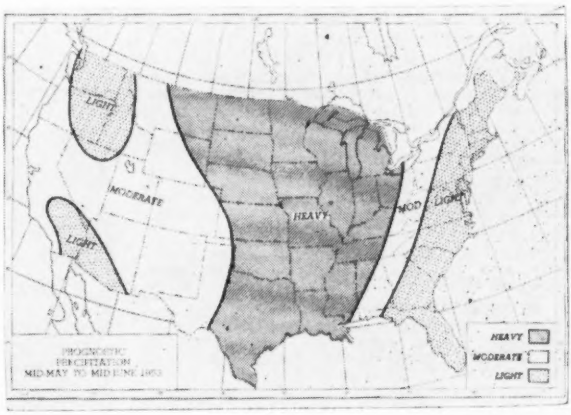
(Continued on page 377)

Average Monthly Weather Resume and Outlook

U. S. Department of Commerce, Sinclair Weeks, Secretary
Weather Bureau, F. W. Reichelderfer, Chief



Prognostic temperature anomaly Mid-May to Mid-June, 1953



Prognostic precipitation Mid-May to Mid-June, 1953

The above charts for the United States show for the next 30 days, the expected departures from normal temperatures and the expected total precipitation by means of classes.

Outlook for Mid-May to Mid-June 1953

The Weather Bureau's 30-day outlook for the period from mid-May to mid-June calls for temperatures to average below seasonal normals west of the Mississippi with greatest departures over the Southern Plateau and Southern Rocky Mountain States. Above normal temperatures are predicted for the eastern third of the nation with greatest departures in the Northeast.

Precipitation is expected to exceed normal over most of the area between the Great Divide and the Appalachians. Subnormal amounts are indicated along the Atlantic Seaboard and not far from normal amounts over the far west.

CAUTIONARY NOTE: The 30-day Outlook given here is not a specific forecast in the usual meteorological sense, but is an estimate of the average rainfall and temperature for the next 30 days based upon the best indications now available. For more specific predictions subscribers should look to the local forecasts published by the nearest Weather Bureau office.

Buy and Sell

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate: 15c per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding publication.

HONEY FOR SALE

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Onsted, Michigan.

ANY GRADE—Any amount. Alexander Co., 819 Reynolds, Toledo, Ohio.

IOWA Honey, one can or truck loads. Russell D. Smalley, Beaver, Iowa.

CLOVER extracted honey in sixties. Abram Brubaker, Lancaster, Pa., Rt. 1.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We can not guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on COD terms except where the buyer has thoroughly established his credit with the seller.

CASH for your comb honey and all types extracted. Send sample and best price. Buckeye Honey Co., 3930 No. High St., Columbus 14, Ohio.

CASH for Beeswax. Write as to quantity and we will quote price. Muench-Kreuzer Candle Co., Inc., Syracuse, N. Y.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & COMPANY, 2613 South Yates Ave., Los Angeles 22, California.

HONEY WANTED, any amount. If you want more for your honey, sell it to Cloverdale Honey Co., Fredonia, New York.

WRITE FOR shipping tags and quotations on rendered beeswax. We buy from one pound up and if you have over 25 pounds let us work it into foundation for you at a 25 percent saving. Walter T. Kelley Co., Clarkson, Kentucky.

WANTED—Light amber clover, amber, goldenrod, buckwheat. Advise what you have for immediate delivery. Roscoe F. Wixson, Dundee, New York.

CASH PAID for white and amber extracted honey. Send samples and state quantity available. Prairie View Honey Company, 12303 - 12th St., Detroit 6, Mich.

WANTED—Carloads or less of honey and wax. Any grade. Send sample and best cash price. Alexander Company, 819 Reynolds Road, Toledo, Ohio.

ALL GRADES HONEY AND WAX WANTED—Mail samples, advise quantity and cash prices delivered to us. HONEY SALES COMPANY, 1808 NO. WASHINGTON AVE., MINNEAPOLIS 11, MINN.

WANTED — Honey all grades. Quote prices and send sample. Write Stoller Honey Farms, Latty, Ohio.

CASH FOR YOUR HONEY—Light extracted or comb. Regular trade send sample. 60-pound cans furnished if desired. W. R. Moomaw, Stone Creek, Ohio.

WANTED — White extracted or comb honey. Send sample. Millersport Honey Co., Millersport, Ohio.

FOR SALE

WRITE FOR CATALOG — Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies and Comb Foundation. Onsted, Michigan.

THE BIGGEST BEE SUPPLY Catalog published (64 pages) free for the asking. Listing many items not found in other Catalogs. No agents—buy direct and save 20%. WALTER T. KELLEY CO., CLARKSON, KENTUCKY.

BEE SUPPLIES—Tin packages; 10 sizes glass jars; paper shipping supplies; window cartons and other items. Roscoe F. Wixson, Dundee, N. Y.

The only comb foundation plant in the east. We sell foundation, work your wax, render combs and cappings. Robin on's Wax Works, R. D. 3, Auburn, N. Y.

BEE SUPPLIES. Catalog free. Hodgson Bee Supplies, Ltd., 575 13th Ave., New Westminster, B. C., Canada.

FOR SALE — New heart cypress 10-frame bottom boards. K. D., 10 or more. $1.00 each; 50 or more. 90 cents each; 100 or more, 85 cents each. One nailed up sample, postpaid, $1.25. Fred L. Poole, Elizabethtown, Rt. 2, Box 67, No. Car.

SIMPLEX TRAP clips queens without handling, $1.00 postpaid. Instant Frame Spacers — eight-nine, specify size, $1.50 postpaid. Free circulars. George Leys, 36 Jackson St., New Rochelle, N. Y.

STEEL FOOD drums, 55 gallon, $2.85 each. For shipment or storage of honey. Alexander Company, 819 Reynolds Road, Toledo, Ohio.

SACRIFICE Standard Langstroth bee equipment and honey house machinery in No. 1 condition, sufficient for approximately 300 colonies. Will take best offer. James Connaty, Uxbridge, Ontario.

FOR SALE—12 10-frame Hoffman hives complete; 18 10-frame hive bodies with drawn comb; complete beekeeping equipment, like new. Edward Kieckbusch, Eagle River, Wisconsin.

TOPS AND BOTTOMS assembled and painted, $1.00 each. 4-frame extractor, $50.00 E. Aiken, 11254 Linden, Lynwood, California.

QUEENBEE PAINTING OUTFIT, $1.50; postpaid. Southwick Apiaries, Waban, Massachusetts.

FOR SALE: Eight and 10-frame, standard beekeeping equipment, clean, for 300 colonies. George R. Stanek, Sturgeon Bay, Wisconsin.

750 colonies of bees in two-story ten-frame hives. With all equipment for extracted honey production. Must sell because of poor health. Geo. Morrison, Cloverdale, Ohio.

FOR SALE—200 used 8-frame hives and supers with frames, reasonable. Mrs. Ben Freeman, Schuyler, Nebr.

FOR SALE — 1000 10-frame 6⅝-inch supers with combs drawn from crimp-wired foundation. No disease. Only $2.00 each. E. E. Salge, Box 59, Garland, Texas.

FOR SALE — 800 deep supers with frames, $1.00 each; 200 shallow frames and extra supers, all 10-frame, $1.00 each. Box 233, Centerburg, Ohio.

Over-stocked on the finest quality beeway sections. Write for bargain quotations on lots of 10,000 and more regular or split. Walter T. Kelley Co., Clarkson, Ky.

BEES AND QUEENS FOR SALE

We use all possible care in accepting advertisements but we cannot be held responsible in case disease occurs among bees sold, or if dissatisfaction occurs. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

GOOD QUEENS AND PACKAGE BEES. Three banded Italians only. Used by leading beekeepers for more than thirty years. Tops in production and gentleness. No disease. Prompt shipment. Queens, $1.20 each; 25, $1.10 each; 100, $1.00 each. 2-lb. pkg. with select young queen, $3.75 each; 25, $3.50 each; 100, $3.25. 3-lb. pkgs. $1.00 each more. If shipped by parcel post, postage to be added. Lower prices after May 20. H. C. Short, Fitzpatrick, Ala.

THREE BANDED Italian bees and queens, extra good workers and gentle to work with. 2-lb. with queen, $3.00; 3-lb. with queen, $4.00. Select queens, 1 to 25, $1.00; 25 up 90c each. Alamance Bee Company, Graham, N. C., Phone 4703.

TWENTY YEARS OF SELECTION, Jersey bred queens for larger crops. Available June 1st. $1.00 each. Milton Stricker, R. D., Annandale, N. J.

YELLOW ITALIAN bees and queens. Real producers, health certificate, satisfaction guaranteed. 2 pounds with queen, $3.75; 3 pounds with queen, $4.75; queens, $1.00 airmail postpaid. O. E. Brown, Rt. 1, Asheboro, North Carolina.

CAUCASIAN bees and queens. They are extra good workers and very gentle. 2-lb. with queen, $3.00; 3-lb. with queen, $4.00. Select queens, 1 to 25, $1.00; 25 up, 90c each. Satisfaction guaranteed. Black River Apiaries, Rt. 1, Currie, N. C.

GOLDEN ITALIAN bees and queens, very gentle and very yellow, 2-lb. with queen, $3.00; 3-lb. with queen, $4.00. Select queens, 1 to 25, $1.00; 25 up, 90c each. Carolina Bee Farm, Graham, N. C., Phone 7731.

NORTHERN ITALIAN QUEENS—Ready June 25th, $1.00 each; 10 up, 90c. Shirl Baker, Rodney, Michigan.

HONEY LABELS

Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.

C. W. AEPPLER COMPANY

Oconomowoc, Wisconsin

FOR SALE or TRADE for Honey and Wax

1 6-row Hope Automatic bottling machine, cost $7500, like new	$2500
1 stainless steel Flash heater 80' double tubed compact	500
110-gal. stainless steel tank	150
200-gal. stainless steel Kettle, 100 lbs. pressure, agitator	950
World labeling machine, semi-automatic	125
1 Burt automatic labeling machine	425
1500-gal galvanized tank, insulated	100
8 90-gal. galvanized Kelly tank with copper heating coils (each)	15
8 electric heaters for tanks (each)	50
2 honey melting tanks, holds 33-60's each (each)	15
Platform lift truck, 2000 lbs.	15
1 honey pump, motor and spill tank	35
Several copper kettles, some agitators, size 100-150 gals. (each)	100-200

SPRINGBLOOM INC.
3522 W. Linden Pl.
Milwaukee 8, Wisconsin

YOUR BEST INSURANCE

FOR A BETTER HONEY CROP in 1954 is to requeen now with Ladylike Caucasian queens. They get results for others; they will make a better crop for you if properly handled.

Prompt shipment. Circular free.

LADYLIKE CAUCASIAN QUEENS

1-11	$1.10 each
12-24	1.00 each
25-50	.90 each
50 or more	.75 each

CAUCASIAN APIARIES
Castleberry, Ala.

HONEY WANTED

Carloads and less than carloads. Mail sample and best prices in all grades.

C. W. AEPPLER COMPANY

Oconomowoc, Wisconsin

Whittle's

Leather Colored Italians

Get your Packages and Queens when you want them. Reserve 1953 shipping dates early.

2 lb. pkg. with queen, $3.00
3 lb. pkg. with queen, 4.00
Queens, each, 1.00

Our Bees and Service Will Please You.

G. E. Whittle
Star Route West
Greenville, Alabama

Booking orders now. Over 30 years a shipper. Send for Free Circulars.

BLUE BONNET APIARIES
Weslaco, Texas

"GULF BREEZE"
Italian Queens

PRICES:
1-24 ..... 80c ea.
25 or more 75c ea. p.p.

BESSONET BEE CO.
Donaldsonville, La.

1953 QUEEN BEES

3-Banded Italians
Untested

1-9 ..... $1.10 each
10 or more ..... 1.00 each

Geo. W. Moore
Shasta, Shasta Co., California

—QUEENS—

Top Quality Italians
Personally raised Queens

After May 1st.
ANY AMOUNT ..... $1.00 ea.

Prices Postpaid Airmail
No Baby Nuclei

SAM E. MOORE

New Address New Phone
Rt. 1, Box 620 REDDING
Anderson, Calif. -147 W 3

EARLY PACKAGE BEES. Prompt shipment begins May 10. Two-pound package and queen, $5.50 postpaid; three-pound package and queen, $6.60 postpaid. Choice Italian queens, $1.25 each. Safe arrival guaranteed. Health certificate furnished. Birdie M. Hartle, Reynoldsville, Penna.

CAUCASIAN Bees and Queens, 2-lb. pkg., $2.75; 3-lb. pkg., $3.50. Queens 75c each; 100, $65.00. Lewis & Tillery Bee Co. Greenville, Ala.

CAUCASIANS, personally raised large, queens, gentle, good workers, $1.00 each, any number. Fred Brock, McDonald, Tenn.

YANCEY HUSTLERS—Three-band Italians. They get the honey. Queens balance of season, $1.00; $10.00 dozen. Caney Valley Apiaries, 2500 Nichols, Bay City, Texas.

CAUCASIAN QUEEN BREEDERS—Specializing in a reliable outside wintering strain of pure Caucasian breeding stock, isolated location. No untested. Full information. J. E. Hastings, Birch Hills, Saskatchewan, Canada.

HELP WANTED

WANTED — Young men interested in learning bee supply business. Openings in shipping, sheet metal, and printing departments. The A. I. Root Co., Medina, O.

HELPER wanted for July and August. M. E. Ballard, Roxbury, N. Y.

CAPABLE BEE MAN for extracted production, season until Nov. 15th. Give experience, age, salary expected either with or without board. Kenneth Thayer, 2122 Ames St., Saginaw, Mich.

WANTED—Beekeeper to operate 69 colonies in southeastern Ohio on shares for serviceman. Standard equipment. ..LT. Russell Moore USN, MOQ-CC16, USNS. Newport, R. I.

SEEDS

HONEY PLANTS: Seeds—Trees—Plants. Illustrated catalog on request. Pellett Gardens, Atlantic, Iowa.

MISCELLANEOUS

SECTION COMB HONEY production procedure steps, 50c. Glossary of Beekeeping Terms, 50c. United Industries, Box 449, Madison 1, Wisc.

Bargain in new or used honey Cans or Root supplies for cash or honey. Buckeye Honey Company, 3930 N. High St., Columbus 14, Ohio.

WANTED

WANTED — 50 to 100 zinc 10-frame queen excluders. Must be in good shape, and cheap for cash. D. P. Green, R. 2, Deland, Fla.

WANT TO BUY, full colonies of bees.—Gene Roose, Sac City, Iowa.

WANTED—Several new or used electric planes for uncapping. L. E. Hicks, 3930 N. High St., Columbus 14, Ohio.

MAGAZINES

THE BEE WORLD, international and scientific journal on bees and beekeeping, with apiculture abstracts. Monthly, including membership in the Bee Research Association, $3.00 per annum, including apicultural abstracts. Dr. Eva Crane, Director, 55 Newland Park, Hull, Yorks, Eng.

Read the South African Bee Journal. Published every two months. Subscription 7/6 per year to the Treasurer, P. O. Box 3306, Cape Town, South Africa.

Know interesting facts concerning the bees of India through the INDIAN BEE JOURNAL, published in English by the Bhupen Apiaries (Himalayas), Ramgarrh Dist. Naini Tal, U. P., India, or available through them. Subs. Rs7/ or 10 shillings or 2.25 dollars per annum. Single copy, Rs 1/4s. 1/9 or 40 cents (International Money Order). Payment in mint postage stamp of your country accepted.

INTERESTED in Angora Goats? Read the Sheep and Goat Raiser, Hotel Cactus, San Angelo, Texas, the only ranch magazine published serving the Angora Goat industry. Subscription $1.00. Sample copy fifteen cents.

BEE LINES TO THE EDITOR

(Continued from page 324)

ducing comb for the first time one will realize that the bees do a lot of things the production of liquid honey does not reveal. You finish up as a much better beekeeper or you quit the comb early."—C. E. K.

* * * * *

Is it Coffee Nerves or Wooden Heads?

"If John Hinches' bees have coffee nerves (p. 267, May 1953 issue) then my bees have them and have had them for several years, and probably have wooden heads, too!

"In order to add humus to our vegetable garden we toss all our garbage in the furrows after our fall plowing and all during the winter, and in the spring, disk it in. We have often noticed on warm days in early spring how our bees swarm over these coffee grounds and garbage, just as described by Mr. Hinches.

"My husband works for a lumber mill and brings home load after load of sawdust for mulches and to add humus to our soil, and this sawdust, too, is just alive with bees on warm spring days. Perhaps it is the rosin in the raw sawdust that attracts them. At any rate, it is the fresh, raw sawdust that is visited by them, and not the older, weathered material.

"Maybe it is the combination of these two—the coffee nerves and wooden heads, that accounts for some of the ornery behavior of my critters some times."—E. E. A.

ATOMIC POWER?
FLYING SAUCERS?
NO! !
HYBRID QUEENS

Under contract we have taken over the equipment and breeding of Kelley's Island 4-way Hybrid queens. No other breeder can offer you these bees. They are known as "Island Hybrids".

Look over your queen needs and place your order for replacements early for immediate or future delivery.

Many favorable reports have been received on this bee.

Prices June 1st to Oct. 15th

	Hybrid Stock	Rossman Stock
1-25	$1.25 ea.	$1.00 ea.
26 or more	1.15 ea.	.90 ea.

"They Produce"

Rossman Apiaries
P. O. Box 133 Moultrie, Ga.

Package Bees with Mated Queens
Italian or Caucasian

Customers: They are better bred, more profitable, gentle, and good honey producers. No deposit required to book your order. Full weight, health certificate, and live arrival guaranteed with each shipment. Send your requirements now.

— Prices —

	1-24	25-50	100-up
2-lb. w/q	$2.75	$2.65	$2.50
3-lb. w/q	3.70	3.60	3.45
4-lb. w/q	4.65	4.55	4.40
Queens	.75	.65	.60

FARRIS HOMAN
Shannon, Mississippi

ASKED AND ANSWERED

(Continued from page 372)

destroyed, the bees would be compelled to start some new ones. When preventing after-swarms by this plan it is well to wait about five days after the prime swarm issues before destroying the queen cells, since, if they are destroyed immediately after the prime swarm issues, the colony may start additional queen cells from the young larvae then in the hive.

PACKAGE BEES & QUEENS

2-lb. pkg. with queen $2.75
3-lb. pkg. with queen 3.40
Queens, by air mail, ea. .75

CARLUS T. HARPER
New Brockton, Ala.

ITALIAN
PACKAGE BEES AND QUEENS
for 1 9 5 3
Write for Prices
GIRARDEAU APIARIES
Tifton, Ga.

HARDY NORTHERN QUEENS

Try our Yankee Queens and see the difference. Ready June 15th.

Tested Queens, $1.00 each

R. L. LIVERMORE APIARIES
Belle Center, Ohio

SECOND GLANCES

(Continued from page 347)

people to see it, but give them a much better understanding of the honeybee and its life processes and actions. It is a commendable piece of work (page 280).

Those eight reasons for using honey (given on the Institute News Notes page) certainly pretty well cover the field. They should be filed—in our memory or otherwise—for use as needed. As the closing paragraph says, we do not need to exaggerate; honey has plenty of good points to tell of.

Hive arrangement in an apiary should be so done that bees can mark their individual homes as well as possible. Shrubbery, an **uneven** placing in the rows, anything to avoid a result of sameness—all are of value to avoid drifting and consequent trouble in many ways (page 286).

Thief River Falls, Minnesota.

FOR TOP QUALITY AND SERVICE
on Package Bees and Queens, send us your orders.
We Offer Two Quality Strains—
DADANT'S STARLINE HYBRID QUEENS
GARON'S THREE-BANDED ITALIAN QUEENS
Reg. U. S. Pat. Off.
PRICES:

	QUEENS		PACKAGES		
	Italians	Starlines	2-lb. w-q	3-lb. w-q	4-lb. w-q
1-24	$0.95	$1.35	$3.25	$4.20	$5.15
25-99	.90	1.25	3.00	3.95	4.90
100-up	.85	1.15	2.75	3.70	4.65

If Dadant Starline Queens desired with packages, add 25c per package.
(Queens Air Mailed, Clipped and Painted if desired without charges)

GARON BEE COMPANY **Donaldsonville, La.**

Those dark Italian queens produced by Weaver Apiaries, Navasota, Texas are always in demand. Twenty-six years experience.

1 to 25 ..... **$1.00**
26 and up, each ..... **.90**

WEAVER APIARIES **Navasota, Texas**

ITALIAN BEES AND QUEENS

2-lb. package with queen $2.25
3-lb. package with queen 3.00
Queens (postpaid) ..... .55

We guarantee prompt shipment, safe delivery and complete satisfaction. Health certificate on all shipments.

BAYOU BEE CO.
Rt. 1 Box 49 Montegut, La.

SULLIVAN'S ITALIANS

2 lb. pkg. with queen $2.50
3 lb. pkg. with queen 3.25
Extra queens ..... .65

Prices effective May 10
Live Delivery and Satisfaction Guaranteed

SULLIVAN'S APIARIES
Gilbertown, Ala.

LET THE QUEEN TELL YOU

(Continued from page 339)

The queen eyed me scornfully. "Do you believe **everything** you read in books? They can feed themselves perfectly well. And just now they have to for the workers are too busy. But I must go in now and see how things are going. And to please you I won't swarm!"

Then I remembered my little book.

"I'll tell you something before you go," I said. "You couldn't really swarm anyway for I've a wonderful method which prevents all that nonsense. So I, too, can have my little joke!"

The queen turned.

"Do you think you can stop me? Well I'll show you."

Suddenly the bees came pouring from the hive. The queen looked at me.

"Don't swallow everything you're told in books," she said.

Then she joined the circling bees.

. . . . . .

I opened my eyes. I was still lying under the hawthorne tree. My pipe was smouldering in the grass. I sat up smartly. And this time I wasn't dreaming. Was my American friend right after all? A swarm was slowly moving away from the apiary.

Personally Reared

Caucasian Queens

$1.00 each

Large lots 90c each

Howard Weaver

Navasota, Texas

ITALIAN QUEENS

$1.00 each

Pure mating guaranteed

W. E. PLANT

Hattiesburg, Mississippi

CAUCASIANS

CARNIOLANS

Hardy, prolific, rapid build up, best of workers. Caucasians have the longest tongue of any race.

Price: Untested queens, $1.00 each, Airmail.

Build beautifully white combs. GENTLEST OF ALL RACES OF BEES. Gentleness saves time, sweat, patience, and work.

Albert G. Hann

Glen Gardner, New Jersey

QUEENS By Return Mail **60c**

2-lb. package with queen	$2.50
3-lb. package with queen	3.00
Tested Queens	1.00

—BRIGHT 3-BANDED ITALIAN—

NOW READY. The past 32 years the foundation of our business has been to furnish you the best bright 3-banded Italians that money could buy. Prompt service, full weight, safe arrival, health certificate, and satisfaction.

Package bees are shipped express F.O.B. If wanted shipped parcel post, the postage will be sent C.O.D.

NORMAN BROS. APIARIES

Ramer, Ala.

ITALIAN

Queens	Queens
Nice large laying queens (each)	$ .55
2-lb. pkg.	2.60
3-lb. pkg.	3.50

MITCHELL'S APIARIES

Bunkie, La.

HOLLOPETER'S QUEENS

Reared in the North of Northern stock full of vim, vigor, and vitality. This strain of three band Italians has stood the test of beekeepers everywhere for over forty years.

— Prices — Untested queens	
1-9	$1.00 each
10-24	.90 "
25-49	.80 "
50-99	.75 "
100-up	.70 "

White Pine Bee Farms

Rockton, Pa.

INSURE YOUR HONEY CROP—WITH BERRY'S "OLD RELIABLE" STRAIN ITALIAN BEES AND QUEENS

Booster Packages **Queen Bees**

STRENGTHEN those weak colonies. REQUEEN the needy ones. Don't take chances! Use DEPENDABLE BERRY STOCK.

Prices from June 1st:	Queens	2-lb.	3-lb.	4-lb.	5-lb.
1-24	$ .75	$2.50	$3.25	$4.00	$4.75
25-99	.70	2.45	3.20	3.95	4.70
100-up	.65	2.40	3.15	3.90	4.65

Queenless "booster pkgs.—deduct price of queen.

M. C. BERRY & SON Box 684 MONTGOMERY, ALA.

ITALIAN QUEENS

$ .60 Airmailed

E. J. Bordelon Apiaries

Moreauville, La. Box 33

Telephone: 2415 Moreauville

SAWYER SERVICE SATISFIES

QUEENS any number .60 each

Honey Bowl Apiaries

F. R. Sawyer - Owner

P. O. Box 574 Bunkie, La.

Peace is for the strong . . .
Buy U. S. Defense Bonds regularly!

Mail Order Prices

We have available the following bee supplies which our inspectors have not passed as first line quality — these are the same as our pre-war mail order brand — slight defects in the material make these great savings possible for you.

These are Offered as "Mail Order Grade"

C 2	Full Depth Supers, 10-frame, empty, 5's, 45 lbs.	$ 8.30 per carton
C13	Shallow Supers, empty, 5's, 28 lbs.	5.20 per carton
D 2	Beeway Supers, empty, 5's, 22 lbs.	4.25 per carton
B 2	Metal Covers with Inner Covers, 5's, 51 lbs.	11.10 per carton
G 6	Standard Frames in 100's only, long top, 45 lbs.	9.95 per carton
G16	Standard Frames in 100's only, 2-piece bottom, 45 lbs.	9.95 per carton
G22	Shallow Frames in 100's only, long thin top, 25 lbs.	7.25 per carton
G26	Shallow Frames in 100's only, long thick tops, 38 lbs.	8.95 per carton
H3B	50 Sheets Imperfect "Wire-Ply", 8 x 16¾", 9 lbs.	6.95 per carton

Available From Medina Only

Net Cash with ORDER — No Discounts

We reserve the right to return your cash if our stock is exhausted when your order is received.

The A. I. Root Company, Medina, Ohio

The most revolutionary improvment in the hive since Langstroth—

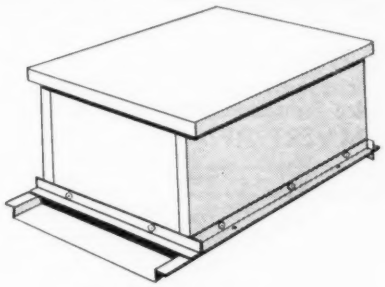
The "UNI-TEMP" ALUMINUM HIVE

- Cooler in summer
- Warmer in winter
- Exceptionally long life
- Light weight
- Rust free, rot free
- Never needs painting
- Accurately bee-spaced

(Patent application in preparation.)

Free Catalog by return mail.

The A. H. HALE CO.



Hapeville, Georgia

JUST NEWS

(Continued from page 369)

A Tri-State meeting of the Indiana, Michigan, and Ohio beekeepers is scheduled for August 7 and 8 at Angola, Indiana, where the three states converge. The Tri-State College of Angola is offering its facilities for lodging and the evening session on the first day, but most of the program will be held at Pokagon Park Pavillion nearby. Further details on the meeting will appear in the July bee journals. A worthwhile program is in the making.

* * * * *

Chris Jensen, Macon, Miss., the well-known bee and queen shipper, was injured and hospitalized on May 10 as a result of damage done by a tornado that hit near Macon. Even though Mr. Jensen has two broken ribs and a stomach injury he hopes to be back on the job soon. We are all pulling for you, "Chris."

* * * * *

The Division of Apiaries of Illinois was originally one of 13 divisions in the Department of Agriculture. In October, 1950, the Division of Apiaries was placed in the Division of Markets. It is now being removed from Division of Markets and will again be a separate Division of Apiaries in the Department of Agriculture. Apparently the present Director of Agriculture, Stillman J. Stanard, recognizes the full value of bees in relation to the agricultural economy of the State of Illinois.

G. B. LEWIS — WOODEN GOODS
DADANTS' WORLD FAMOUS CRIMP WIRED FOUNDATION

Their ninety years' experience is your insurance. Wholesale and retail quantity prices on request.

DOTSONS' APIARIES
3059 W. Roxboro Rd., NE Atlanta Ga.

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Quality & Service
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Healthy Italian Bees & Queens
Write for 1953 Prices
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The World's Gentlest Honeybees
Breeding them since 1940
Queens, only six for $5.00 or $1.00 each.
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3 Banded Italian Queens

1-24	$ .80
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Prices prepaid. Health Certificate and Guaranteed safe arrival.
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25 years selective breeding coupled with one of the best locations and the KNOW HOW, are responsible for one of the best strains of bees on the market. Ask your neighbor about our Better Bred Queens.

Price for remainder of the season, 65c each, any quantity.

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"ITALIANS"

	1-9	10-99	100-up
2-lb. pkg. with queen	$3.25	$3.00	$2.90
3-lb. pkg. with queen	4.25	4.00	3.80
4-lb. pkg. with queen	5.25	5.00	4.75

Extra Queens .....75c each

We guarantee live delivery, a health certificate with each shipment, and service on which you can depend. Shipments by Express or Parcel Post.

Quality Does Not Cost — It Pays

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Don't bargain shop for queens. The temptations may be great but remember that good queens can easily be the difference between a honey crop and a failure. We strive to produce one grade only and that "THE BEST". There are production methods that will produce so called queens but still lack the essentials. The heat of summer presents many hazards to adversely influence a queen breeder's efforts. We would not mislead you to think we believe we have the only really good bees and queens, but can assure you they rank at the top. We do not cater to package trade after June 1st, but can supply. Super Service.

— PRICES —

MAGNOLIA STATE Italian Queens		DADANT IMPROVED STOCK Hybrid Queens, Jensen reared	
1-24	$1.25	1-24	$1.50
25-99	1.15	25-99	1.40
100-up	1.00	100-up	1.25
Clipped, Marked on request only		Clipped, Marked free	

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York's Quality Bred Queens
Two Strains
Queens Bred Up to a Quality, Not Down to a Price

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Each Package with a Young Laying Queen

Lots of	2-lb.	3-lb.	4-lb.	5-lb.
1 - 29	$3.25	$4.00	$4.75	$5.50
30-100	3.00	3.75	4.50	5.25
100-up, each	2.80	3.50	4.25	5.00

Tested Queens $2.00 each Untested Queens $1.00 each

For introduced queens, add $1.00 per package. If queenless bees are wanted, deduct $1.00 from the price of each package.

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THREE-BANDED ITALIAN BEES AND QUEENS

We guarantee liberal overweight packages, young baby bees, young mated queens, no drones. Shipping cages made of extra light material which saves on postal and transportation charges.

	Queens	2-lb. w/q	3-lb. w/q
1 -24	$1.00	$2.75	$3.65
25 -99	.90	2.60	3.50
100-up	.75	2.45	3.35

For queenless pkg. deduct price of queen

Prompt Service — Live Delivery Guaranteed

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Lucedale, Mississippi

THRIFTY QUEENS

Three-banded Italians only

Lots of 100 ..... $55.00

Smaller lots, each ..... .65

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Breeders Since 1892

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Nuclei made to order
Italian Queens

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90c

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Best Quality, Prompt Service, Full Weight.

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25-up ..... 65c by prepaid air mail

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